HANDBOOK OF

ENDANGERED MAMMALS OF INDIA

©

WWF World Wide Fund for Nature - India

Handbook of Endangered Mammals of India

WWF

World Wide Fund for Nature - India

© WWF INDIA, 1992

Published for WWF INDIA by Avenash Datta
at 172-B, Lodi Estate, New Delhi - 110 003.

Compiled from the book of Indian Animals:
S.H. Prater; Wildlife in India: V.B. Saharia; and
Mammalia of India: Robert A. Sterndale.
Designed & produced by Wildlife Youth Services,
New Delhi and printed at Ajanta Offset &
Packagings Ltd., New Delhi.

FOREWORD

The Handbook of Endangered Mammals of India is the first in a series of handy guides for the many young naturalists and wildlife enthusiasts associated with the programmes of WWF INDIA. The Nature Clubs of India (NCI) programme has over the years generated life-long commitments to conservation among hundreds of young students as well as older professionals. WWF INDIA will continue to generate resource material such as this Handbook for supporting the NCI movement.

M.S. Swaminathan
President
World Wide Fund For Nature — India

INTRODUCTION

The Indian Wildlife (Protection) Act is the country's most important legislation for the protection of its diverse fauna and flora. Enacted in 1972, with a major amendment in 1991, the Act provides for the conservation of most wild animals, including mammals, birds, reptiles, and amphibians. It covers also many species of plants found in the country. It is under the Act that all hunting, trading, or capture of wildlife is decided. There are six Schedules to the Act dealing with different categories of animals and plants. While Schedule I and part of Schedule II are concerned with endangered and rare species, Schedules III and IV are for animals that are comparatively common. Schedule V is a short list of animals such as the rat, the crow, or the fruit bat that are considered "vermin" and whose hunting is permitted. As of today, no other animal may be hunted or traded for commercial purposes. Schedule VI is a newly introduced section meant for plants.

Most endangered animals are part of Schedule I of the Indian Wildlife Protection Act (1972). The mammals included are the tiger, the musk deer, the marbled cat, the hispid hare, etc. Birds such as the mountain quail, the Andaman teal, and the Jerdon's courser are also part of it.

The word 'endangered' is meant to apply to those animals and plants whose survival is unlikely if the causal factors that threaten them continue operating. They are species whose numbers have been reduced to a critical level or those species whose habitats have been so drastically reduced that they seem to be in danger of extinction. Technically, therefore, an endangered animal can be distinguished from a rare animal which may have a small world population but whose very survival is not in danger.

Contents **Pg No.**

FOREWORD i

INTRODUCTION ii

ANDAMAN WILD PIG *Sus scrofa andamanesis* 1

BHARAL *Pseudois nayaur* 1

BINTURONG *Arctictis binturong* 3

BLACKBUCK *Antilope cervicapra* 3

BROW-ANTLERED DEER *Cervus eldi* 5

HIMALAYAN BROWN BEAR *Ursus arctos* 7

CAPPED LANGUR *Presbytis pileatus* 9

CARACAL *Felis caracal* 11

CHINKARA *Gazella gazella* 13

CLOUDED LEOPARD *Neofelis nebulosa* 15

CRAB-EATING MACAQUE *Macaca fascicularis* 15

DESERT CAT *Felis libyca* 17

RED FOX *Vulpes vulpes* 19

ERMINE *Mustela erminea* 21

FISHING CAT *Felis viverrina* 21

FOUR-HORNED ANTELOPE *Tetracerus quadricornis* 23

GAUR *Bos gaurus* 25

GOLDEN CAT *Felis temmincki* 27

GOLDEN LANGUR *Presbytis geei* 29

GRIZZLED GIANT SQUIRREL *Ratufa macroura* 29

HIMALAYAN IBEX *Capra Ibex* 31

HIMALAYAN TAHR *Hemitragus jemlahicus* 33

Contents **Pg No.**

HOG BADGER *Arctonyx collaris* 35
HOOLOCK GIBBON *Hylobates hoolock* 37
INDIAN ELEPHANT *Elephas maximus* 39
INDIAN LION *Panthera leo persica* 41
INDIAN WILD ASS *Equus hemionus khur* 43
INDIAN WOLF *Canis lupus* 45
KASHMIR STAG *Cervus elaphus hanglu* 47
LEOPARD or **PANTHER** *Panthera pardus* 49
LEOPARD CAT *Felis bengalensis* 51
LESSER or **RED PANDA** *Ailurus fulgens* 53
LION-TAILED MACAQUE *Macaca silenus* 55
SLENDER LORIS *Loris tardigradus* 57
LYNX *Felis lynx* 59
MALABAR CIVET *Viverra megaspila* 59
MALAYAN SUN BEAR *Helarctos malayanus* 61
MARBLED CAT *Felis marmorata* 61
MARKHOR *Capra falconeri* 63
MOUSE DEER *Tragulus meminna* 65
MUSK DEER *Moschus moschiferus* 67
NILGIRI LANGUR *Presbytis johni* 69
NILGIRI TAHR *Hemitragus hylocrius* 69
NAYAN *Ovis ammon hodgsoni* 71
PALLAS'S CAT *Felis manul* 73

Contents **Pg No.**

INDIAN PANGOLIN *Manis crassicaudata* 75
and
CHINESE PANGOLIN *Manis pentadactyla*

PYGMY HOG *Sus salvanius* 77

RATEL *Mellivora capensis* 79

GREAT INDIAN ONE-HORNED RHINOCEROS 79
Rhinoceros unicornis

SEROW *Capricornis sumatraensis* 81

CLAWLESS OTTER *Aonyx cinerea* 83

SLOTH BEAR *Melursus ursinus* 85

SLOW LORIS *Nycticebus coucang* 85

SMALL TRAVANCORE FLYING SQUIRREL 87
Petinomys fuscocapillius

SNOW LEOPARD *Panthera uncia* 89

SPOTTED LINSANG *Prionodon pardicolor* 91

SWAMP DEER *Cervus duvauceli* 93

TAKIN *Budorcas taxicolor* 93

TIBETAN ANTELOPE OR CHIRU *Pantholops hodgsoni* 95

TIBETAN GAZELLE *Procapra picticaudata* 97

TIBETAN WILDASS *Equus hemionus kiang* 99

TIGER *Panthera tigris* 99

SHAPU or **URIAL** *Ovis orientalis* 101

WILD BUFFALO *Bubalus bubalis* 103

WILD YAK *Bos grunniens* 105

1 Endangered Mammals

ANDAMAN WILD PIG *Sus scrofa andamanesis*

Much smaller than the mainland pig, the Andaman Wild Pig has hardly any hair on its neck, crest, or back. The short tail has a tuft of brown hair. The body is covered with shaggy, black hair, with some of the dorsal hair turning brownish-grey at the tips.

It is endemic in the Andaman Islands in the tropical rain forests and feeds on roots, tubers, insects, and carrion.

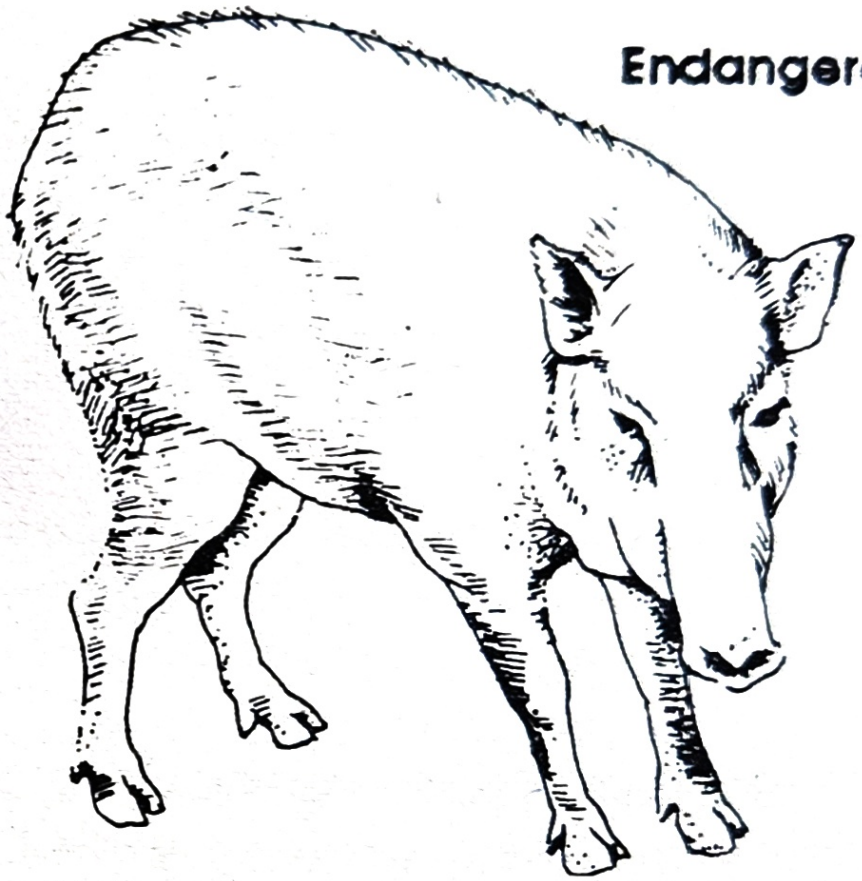
Due to extensive killing by tribals and fast shrinking forest cover, the population has dwindled drastically.

BHARAL *Pseudois nayaur*

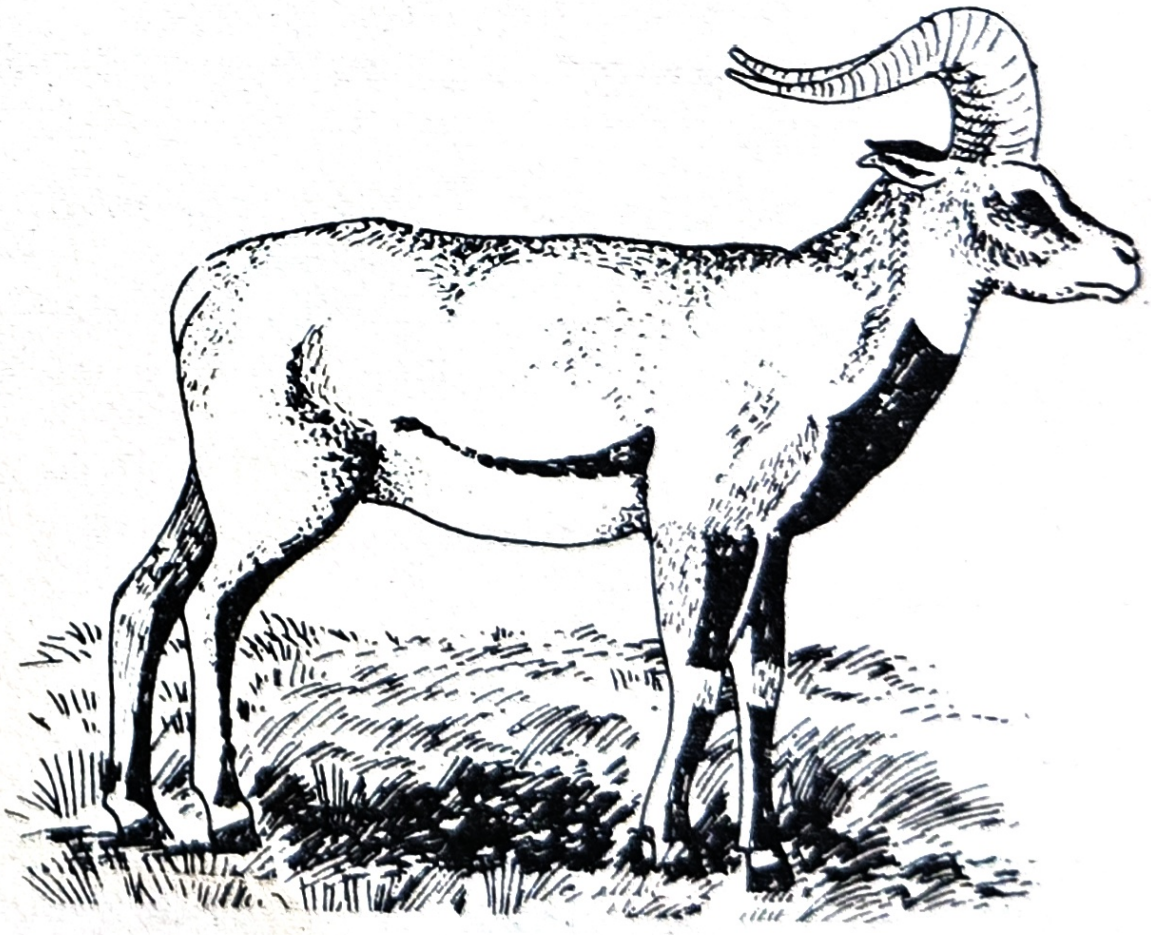
Standing approximately 90 cm high at the shoulders, the Bharal is commonly called the Blue Sheep because of its slaty blue colour mixed with brown.

The face and sheet of old rams is black, and a black stripe runs across the middle of the flanks to the front of the legs. All these black markings are absent in the ewes. The horns, averaging 58-60 cm, are rounded and smooth and curve over the neck. They are marked with fine lines of growth.

In habit, as in build, the Bharal shares the features of goats and sheep. Though it grazes on grassy undulating slopes, it does not hesitate to climb steep, precipitous cliffs. It lives in big flocks but breaks into smaller ones, consisting of a ram and his harem of wives, in the rutting season in September.



ANDAMAN WILD PIG *Sus scrofa andamanesis*



BHARAL *Pseudois nayaur*

The Bharal is found in Ladakh, Sikkim, and Kumaon Himalaya in elevations of 3660-4840 m. They have become rare today due to excessive hunting for flesh and fur.

BINTURONG *Arctictis binturong*

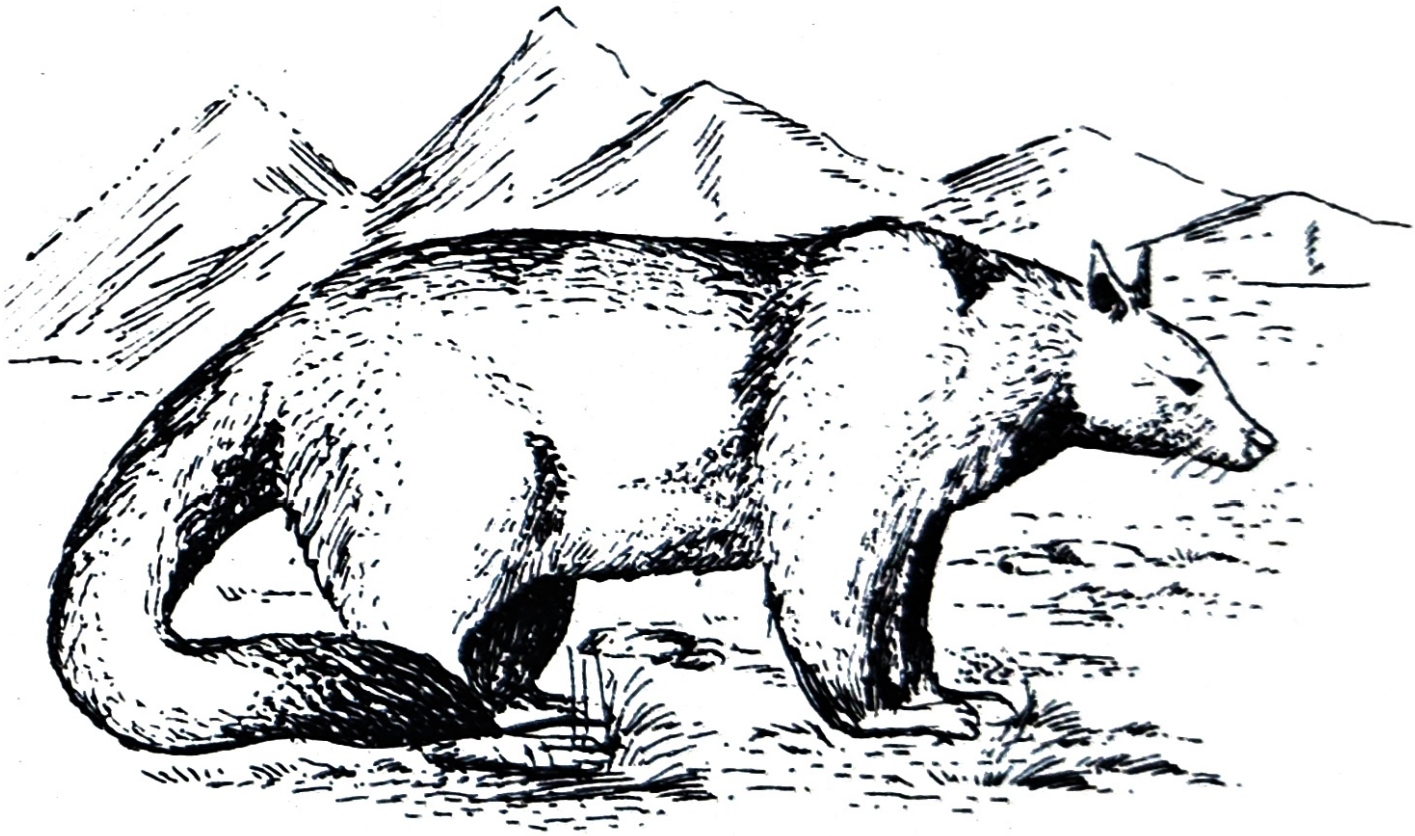
The Binturong is the only Indian animal other than the Pangolin with a powerful prehensile tail. It can be distinguished easily from other civets by virtue of its tufted ears, long shaggy coat (more like that of a bear) and its thick tail covered with long hair. Measuring about 75-90 cm, with a 70 cm tail, the Binturong is mainly black in colour, but the black is mixed with buff and white hair, giving a grizzled appearance. The tail is very thick at the base and covered with hair longer than that on the body.

It is arboreal in habit, spending the day curled up in a hole in a tree and coming out only at dusk to hunt for food. As it is omnivorous, like other civets, it feeds on small animals, birds, insects, and fruits.

Not much is known about the secretive. nocturnal Binturong which is rarely encountered in the dense forests of Assam and Sikkim.

BLACKBUCK *Antilope cervicapra*

The Blackbuck is the only representative in India of the genus Antilope. Exclusive to India, this animal is unrival-



BINTURONG *Arctictis binturong*

led in beauty. It inhabits the open grasslands and scrub forests of Rajasthan, Gujarat, Maharastra, Karnataka, and Madhya Pradesh.

Standing 80 cm high at the shoulders with spiralled horns measuring from 50-65 cm, the adult male is dark-coloured, its coat ranging from dark-brown to nearly black. The underparts, muzzle, and a ring around the eye are a whitish cream. Females with horns are very rare.

Usually seen in herds of 20 or 30, Blackbuck graze throughout the day, lying down to rest in the hot hours of the afternoon. Though their sense of smell and hearing is not very good, they protect themselves with the help of their keen eyesight and terrific speed.

Blackbuck breed in all seasons, but the main rutting season is between February and March. One or two young ones are born at a time.

Hunting for its horns and skin as also extensive disturbance in its habitat are responsible for the sharp decline in its population.

BROW-ANTLERED DEER *Cervus eldi*

Believed to be extinct, the Brow-antlered Deer was rediscovered in the floating swamps of tall reeds and grasses growing on a mat of humus in the Loktak Lake. Stringent measures taken to protect this rare deer in its natural habitat have been suitably rewarded.

BLACKBUCK *Antilope cervicapra*

7 Endangered Mammals

This highly endangered species is now confined to a small area around Loktak Lake in Keibul Lamjao Sanctuary in Manipur. Hardly a hundred animals survive today in the wild. In fact, their numbers are much more in zoos.

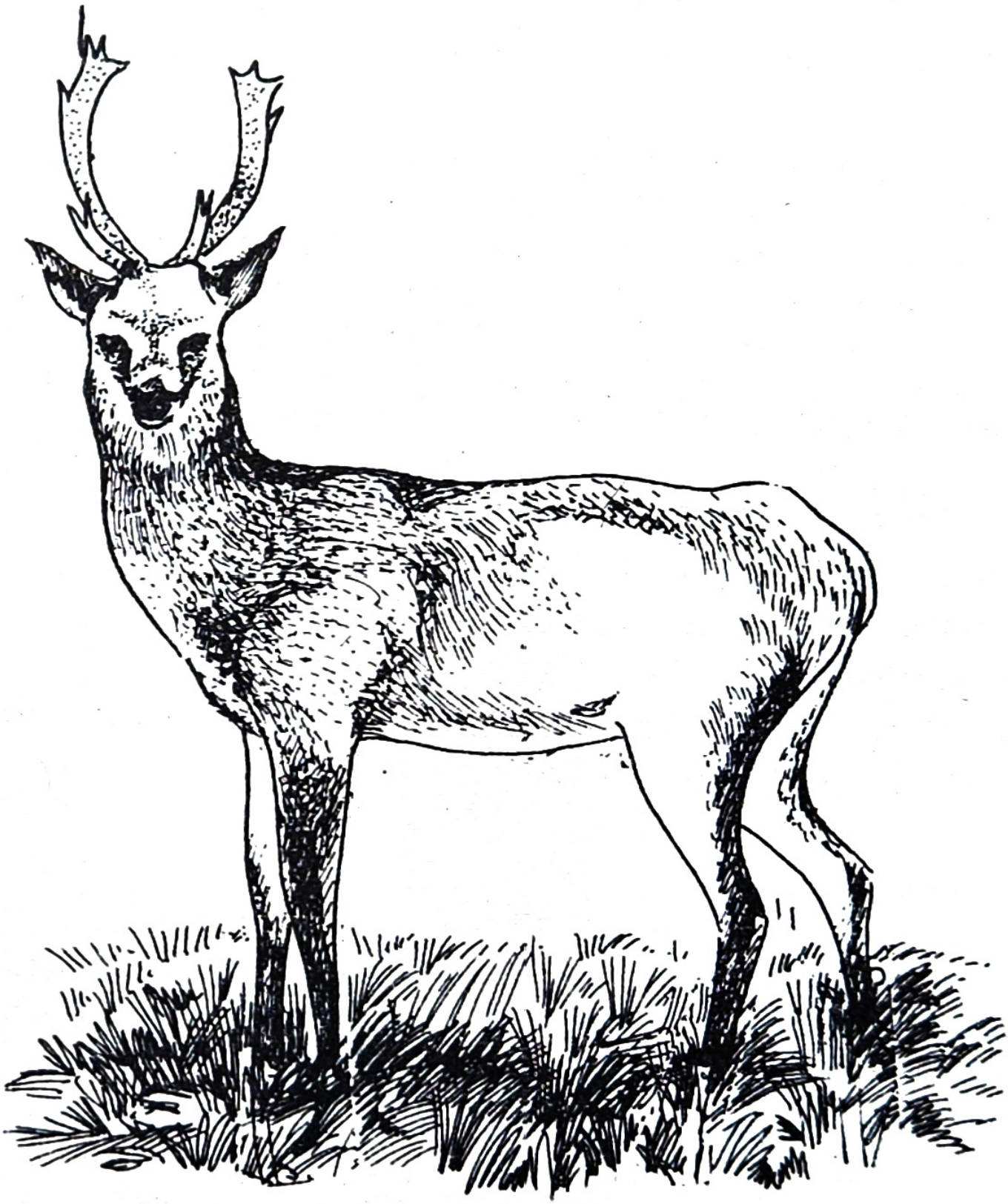
Marginally smaller than the Sambar, the Thamin measures nearly 120 cm at the withers. The maximum length of the antlers is about 107 cm.

Adult males are dark golden-brown whereas females are fawn-coloured. The young ones are spotted with white. The antlers sweep in one graceful curve from the tip of the brow-line to the point of the beam and, if seen in profile, the outline is almost circular. As with other deer, the Brow-antlered deer also sheds its antlers periodically. New antlers are covered with a velvety sheath, which is shed on completion.

They prefer flat or undulating ground between rivers and hills, and live in small herds. Coming out to feed in the mornings and evenings, speed and sight are the main means of protection for this deer. Rutting takes place between March and April.

HIMALAYAN BROWN BEAR *Ursus arctos*

The Himalayan Brown Bear is larger than the Sloth Bear, measuring about 170 cm or more. The coat is shorter, brown, and varies marginally in colour and length from season to season. It is generally heavily built, and its claws are shorter than those of the Sloth Bear.



BROW-ANTLERED DEER *Cervus eldi*

The Himalayan Brown Bear haunts the bare open peaks in the upper reaches of the Himalaya, above the tree line, from Kashmir east to Sikkim, occasionally coming down to the lower reaches in severe winter weather.

After hibernating through winter, these bears wake up in spring to go up to the snow line. Here they feed on newly sprouted grass, insects, and marmots. They often take to killing sheep and goats, which are brought to the high pasture-lands for grazing in summer. In autumn, the bears come down to the lower reaches, where they can feed on wild berries, apricots, peaches, apples, mulberries from fruit orchards, and buck wheat from maize fields. They seldom climb trees.

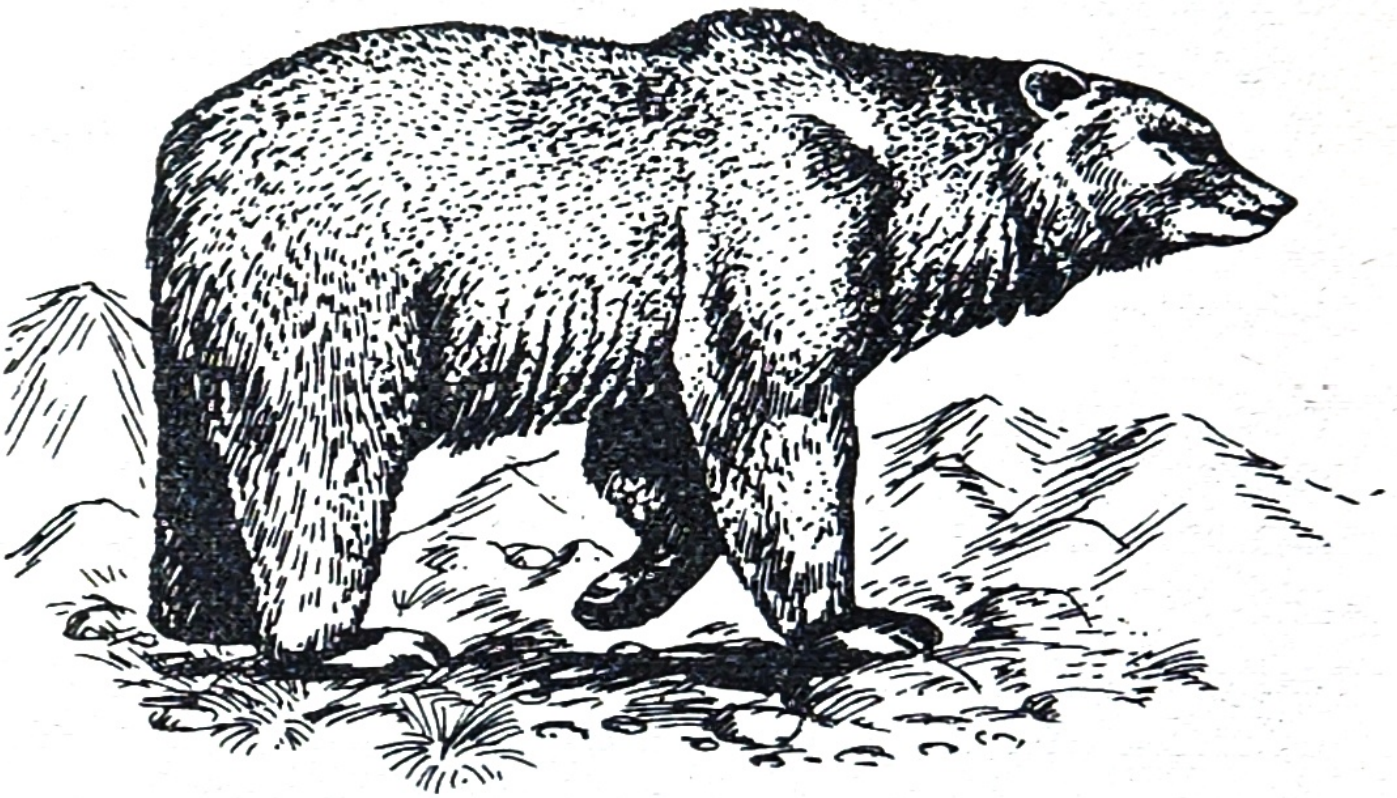
The young are born in winter and remain with their mother till they attain maturity.

The Brown Bears are hunted for their gall bladder which is supposed to have medicinal properties, their fur, as also for their flesh and fat.

CAPPED LANGUR *Presbytis pileatus*

Long coarse hair directed backwards on the forehead gives the appearance of a cap and the monkey its name.

Measuring around 60-70 cm, with a tail 75-100 cm long, the Capped Langur is more or less the same size as the Common Langur or Hanuman Monkey. It differs from the other langurs mainly in colouration: its back and



HIMALAYAN BROWN BEAR *Ursus arctos*

legs are dark grey, while the tip of the tail is almost black. The cheeks and ventral portion are fulvous orange or golden orange, in sharp contrast to the dorsal dark colour.

It inhabits the tropical and deciduous dense forests of north-eastern India. Extremely shy by nature, they keep to the trees, rarely coming down even to drink water, their requirement of water being satisfied by licking dew and raindrops from leaves. Like all langurs they are vegetarians, feeding on fruits, flowers, and leaves.

Not much is known of the social life of these monkeys.

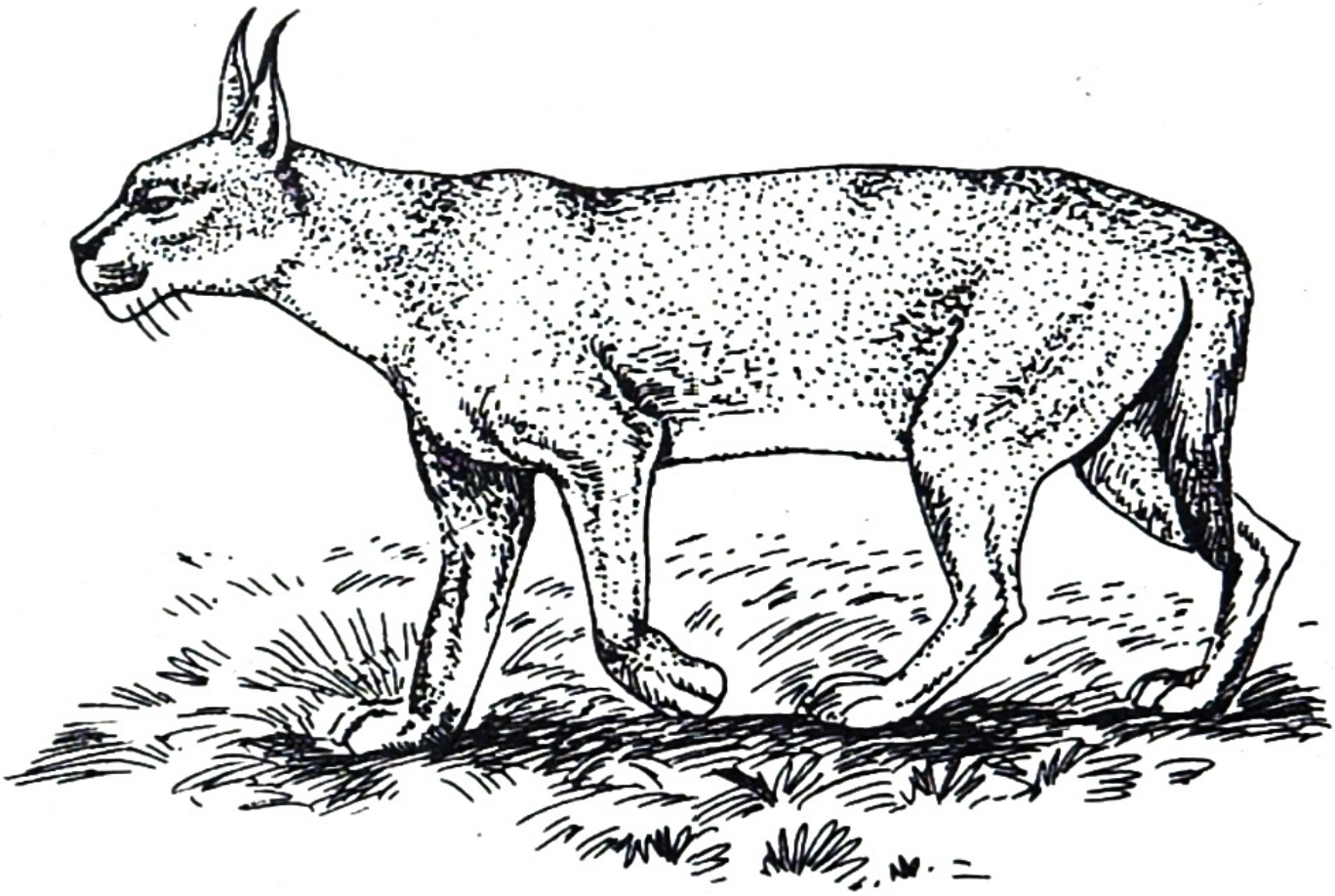
CARACAL *Felis caracal*

It is longer than the domestic cat, its hind portion being higher than the shoulders. Of all the species of cats, the Caracal comes nearest to the Cheetah in the structure of its hind feet.

About 60 cm in length, with the tail measuring approximately 24 cm, the coat of this cat is thick, soft, and uniformly reddish-grey in colour, fading towards the abdomen to buff white. The ears are long with dark tufts of hair at the tip.

The Caracal is found in the arid and semi-arid tracts of Punjab, Rajasthan, Uttar Pradesh, and central India.

An elusive animal, it preys on birds and small mammals but is sometimes even capable of killing small deer. Little is known about its habits in the wild.



CARACAL *Felis caracal*

Habitat loss and hunting for its beautiful pelt have reduced its population considerably.

CHINKARA *Gazella gazella*

The Chinkara is a small gazelle of slender build, standing 65 cm high at the shoulders.

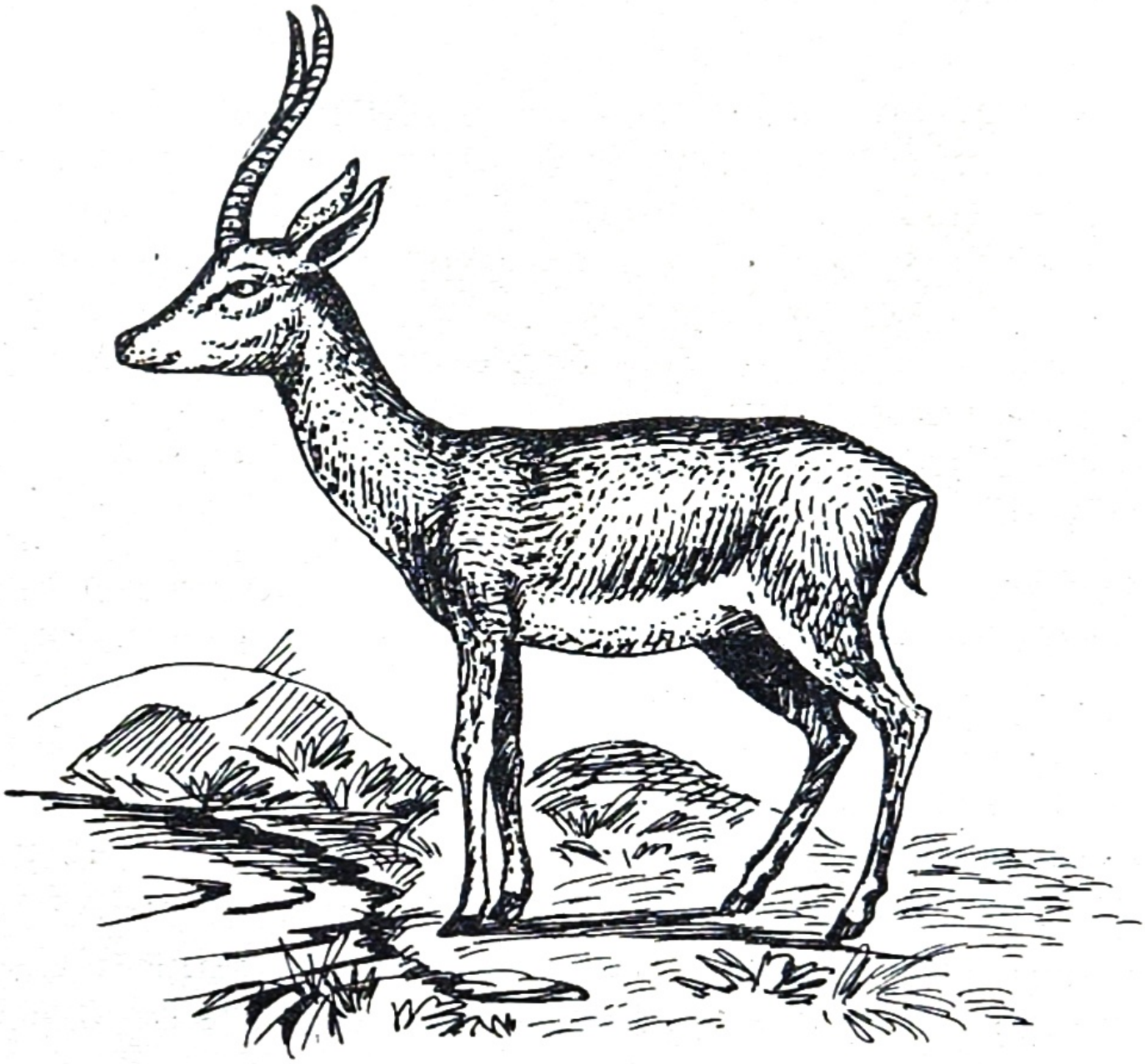
The body is light chestnut above and white below. A deep chestnut band runs around the belly where the white meets the chestnut colouring.

In the male, horns are about 30 cm long and have 15-25 rings though they may appear straight, and slightly S-shaped. Hornless females are not uncommon. But if they have horns, these are totally smooth and ringless.

Basically an animal of the desert, the Chinkara also inhabits grassy plains, scrub zones, and low hills of north-western and central India, extending to the south of the Krishna river.

The Chinkara are shy creatures, coming out to feed on grass, leaves, crops, and fruit only in the evenings. They can do without water for long periods. Less gregarious than the Blackbuck, the Chinkara live in smaller herds. The males are territorial, fiercely guarding their domain of about 200 metres. They do not have a particular breeding season.

They have become rare mainly due to hunting for their flesh, horns, and skin.



CHINKARA *Gazella gazella*

15 Endangered Mammals

CLOUDED LEOPARD *Neofelis nebulosa*

The Clouded Leopard comes closest to the extinct sabre-toothed tiger in its well-developed upper canine teeth.

It has a long body and tail—about approximately 190 cm—and short limbs. The overall colour is yellowish or greyish-brown with dark brown elongated markings. These markings turn into oval patches, beyond the shoulder, lined with black or dark brown, fading to lighter or greyish brown in the centre. This gives a clouded appearance, hence the name. The limbs and underparts are marked with large spots, and the tail is ringed.

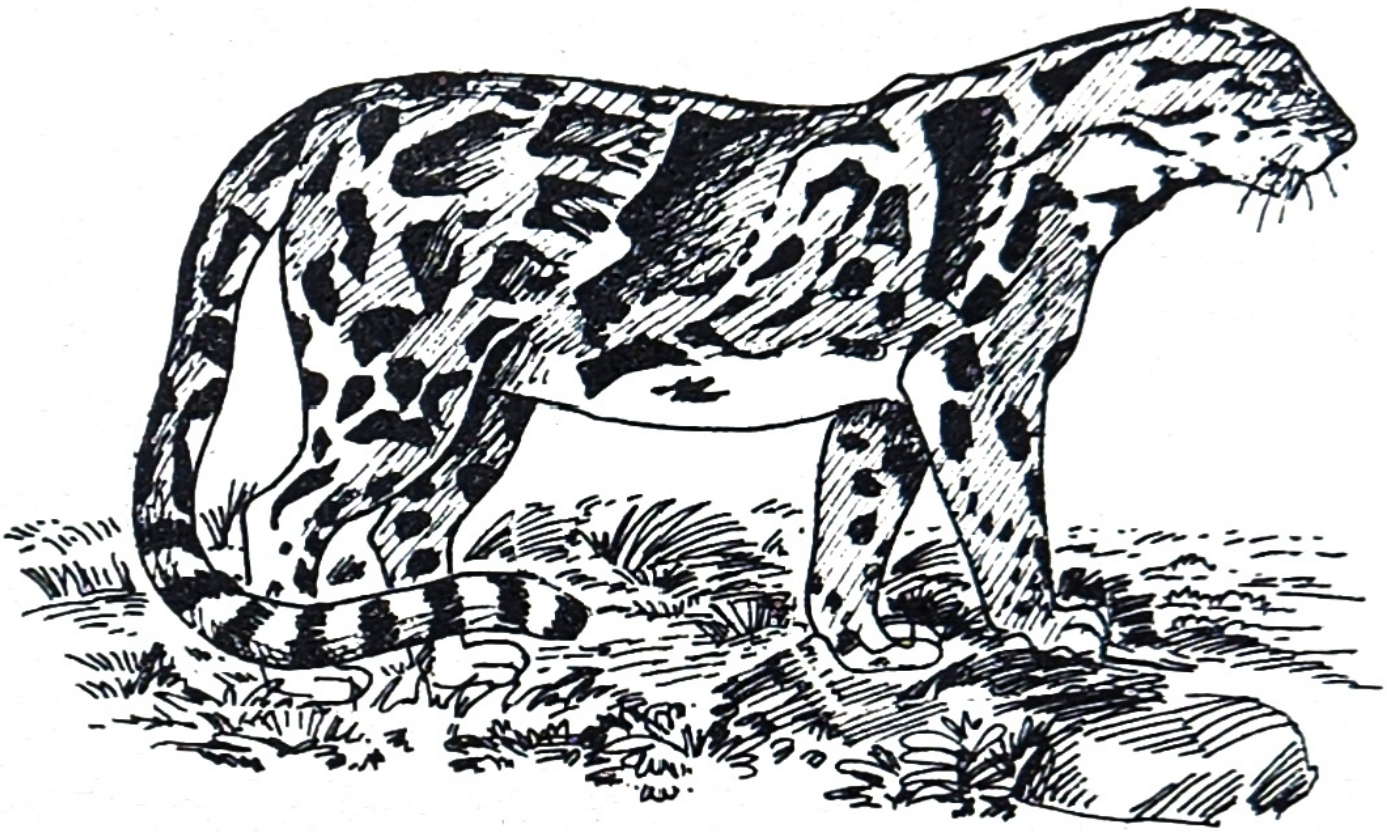
The Clouded Leopard inhabits the dense evergreen forests of Sikkim, Arunachal Pradesh, Nagaland, and the eastern parts of Assam.

Largely arboreal, it is extremely shy and hunts at night. The prey consists of deer and other equally large animals. Sometimes it preys on goats and pigs from nearby villages. It hides its litter (generally two) in hollows of trees.

Though it is difficult to spot in its dense habitat, it is threatened as it is relentlessly hunted for its beautiful coat.

CRAB-EATING MACAQUE *Macaca fascicularis*

This monkey resembles the common Rhesus Monkey and the Bonnet Monkey of South India in its size and



CLOUDED LEOPARD *Neofelis nebulosa*

appearance. The only difference is its longer and thicker tail.

The population is restricted to a few islands in the Nicobar group. They feed on fruits, shoots, and crabs.

The Crab-eating Macaque was once very common in the Nicobar Islands but due to human encroachment and depletion of the rich forest cover along the coastal frontline, their population is on the decline.

DESERT CAT *Felis libyca*

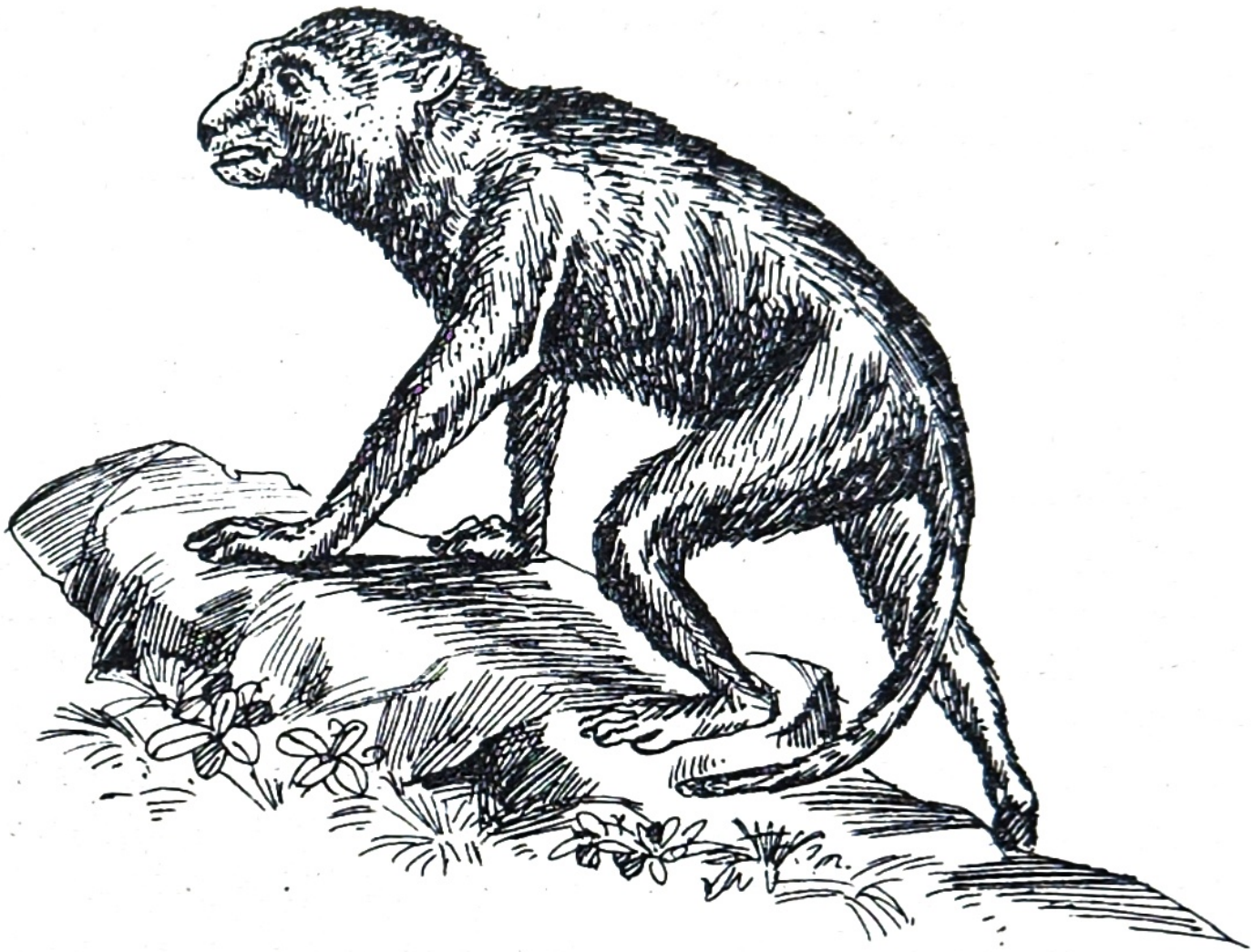
The Desert Cat can be easily differentiated from the Jungle cat by the black spots that mark its yellowish-grey coat.

More or less the same size as a domestic cat, it measures about 60 cm with a 30 cm tail. The terminal half of the tail has black rings and there are two horizontal black stripes on the cheeks. The chin, throat, and breast are white, and the inner side of the forearm is marked with two black bars while the outside has dark crossed lines.

It inhabits the desert regions of north-western India and the semi-arid zones of central India.

Its prey consists mainly of desert gerbils, rodents, and small birds.

Once very common in Rajasthan, it has now become rare as it is indiscriminately killed for fur.



CRAB-EATING MACAQUE *Macaca fascicularis*

RED FOX *Vulpes vulpes*

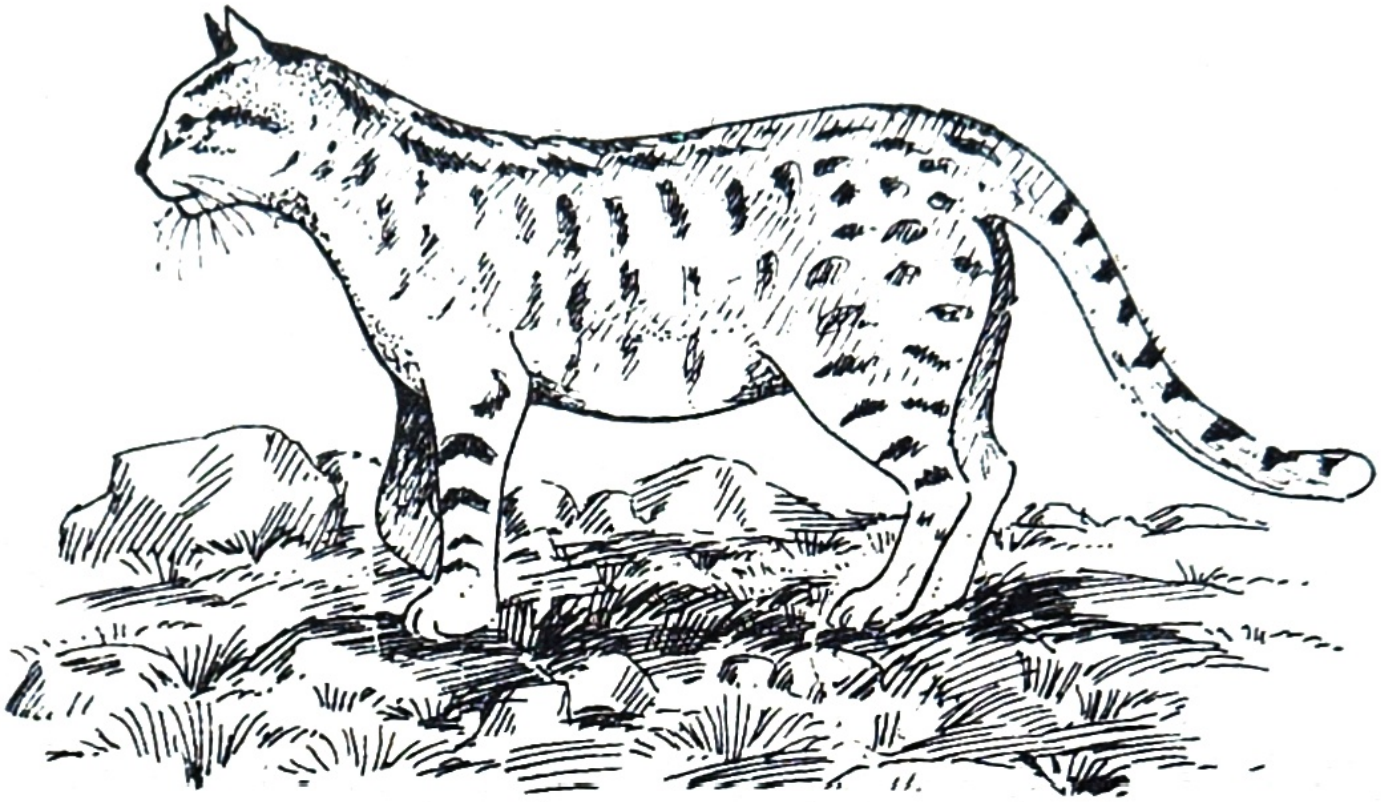
Three races of the Red Fox are recognized from India: a mountain form, the Hill Fox *(montana)* of the Himalaya, a northern desert form *(griffithi)*, and a western desert form, the Whitefooted Fox *(pusilla)*.

The bodily length of the Red Fox is about 60 to 70 cm and the tail measures 45 to 50 cm approximately. Red is the dominant colour of the silky long fur, though it may vary slightly according to the season and its region of distribution. Black upper-half ears and white tipped tail distinguish it from other Indian foxes. The tail is thick and brush-like.

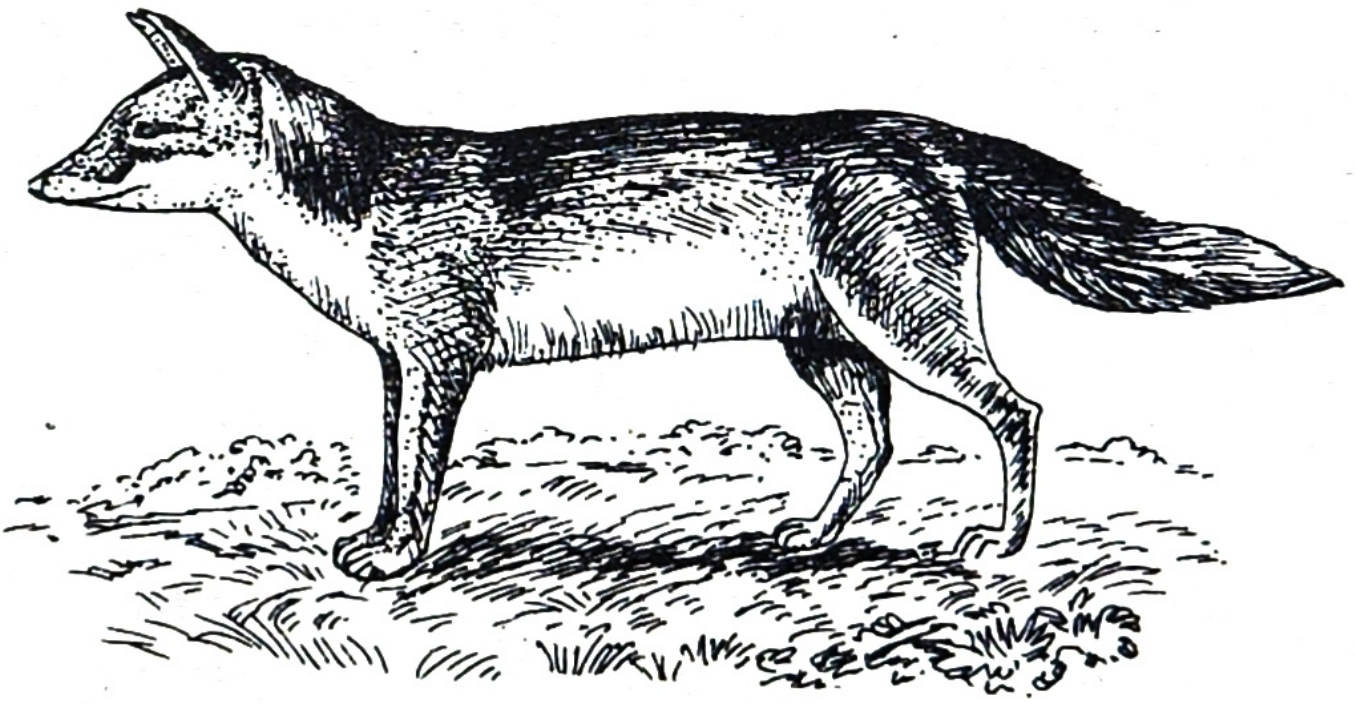
The Red Fox inhabits Tibet, Ladakh, and Kashmir extending into the desert zone of north-western India.

It prefers a dry climate to a moist one, and lives in bushes, cultivated lands, and among the sand dunes and scrub in deserts. Like other foxes, the Red Fox is generally nocturnal in habit and hunts for food singly or pairs. Their food, depending on habitat and season, comprises of rodents, partridges, pheasants, squirrels, fruits, and berries. It is believed that the Red Fox pairs for life and occupies the same den year after year.

They are hunted for the commercial value of their fur and also to protect poultry, goats, and sheep from their predation.



DESERT CAT *Felis libyca*



RED FOX *Vulpes vulpes*

21 Endangered Mammals

ERMINE *Mustela erminea*

The Ermine or the Stoat is about 25 cm approximately with the tail measuring around 10 to 12 cm.

It is brown above, with white on the skin, upper lip and lower surface of the body inside of limbs and feet. The tail is brown with a black tip. In winter the colour of the whole body changes to a yellowish-white, with the exception of the black tip of the tail.

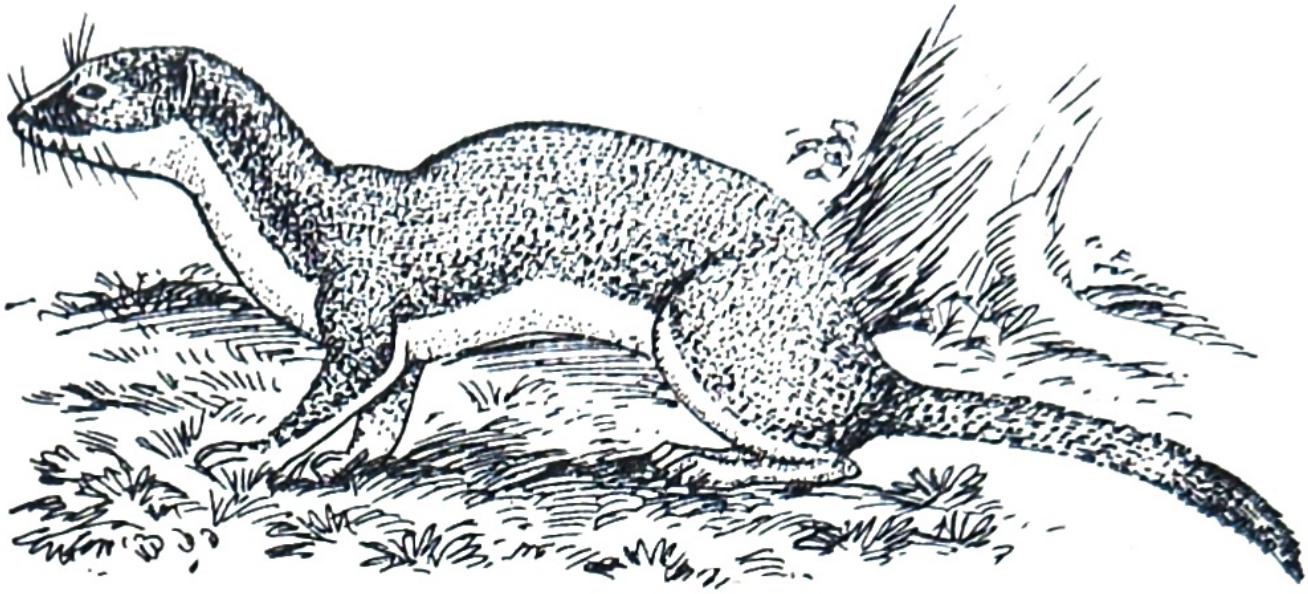
It makes it den among rocks and trees, or in the burrows made by other animals, in its habitat zones in Chitral, Hazara, and Kashmir.

The Ermine displays the ferocity typical of the weasel family, killing animals larger than itself for food. The diet includes rats, birds, eggs, reptiles, chickens, and pigeons from nearby human dwellings.

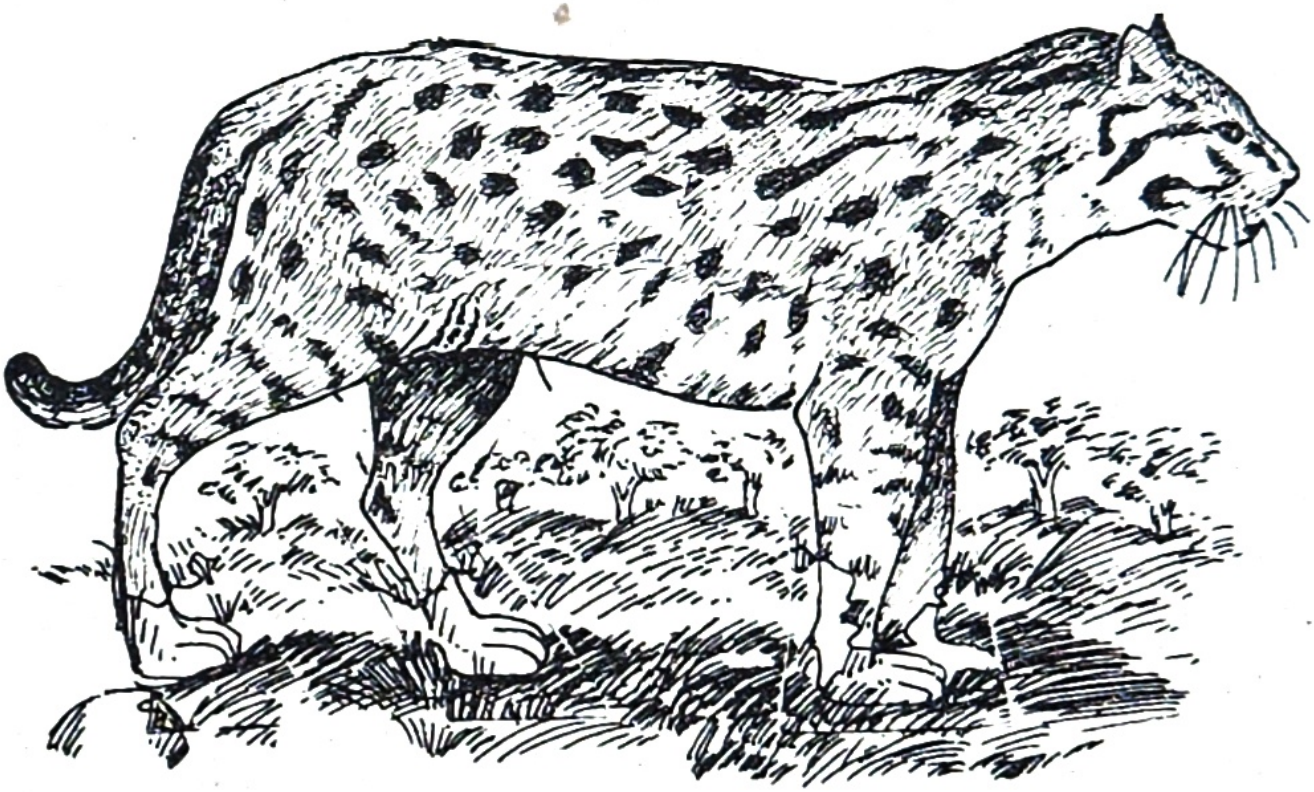
It is hunted for the beautiful fur, which however, becomes valuable only after it has completed its winter change.

FISHING CAT *Felis viverrina*

The Fishing Cat is more or less the same size as a large domestic cat, approximately 100 cm with a 30 cm tail. It is muddy-grey in colour, with long, dark spots arranged in 6 to 8 rows, emanating from the forehead. The cheeks are whitish-grey, with two dark brown horizontal stripes, and a black-ringed tail.



ERMINE *Mustela erminea*



FISHING CAT *Felis viverrina*

It is different from other cats in that it has webbed forepaws which help it to scoop out fish from shallow waters.

This cat roams the dense jungles and scrub forests near mountain streams in the Himalaya, and can be found upto 4500 feet in the foot hills of Uttar Pradesh and Bengal.

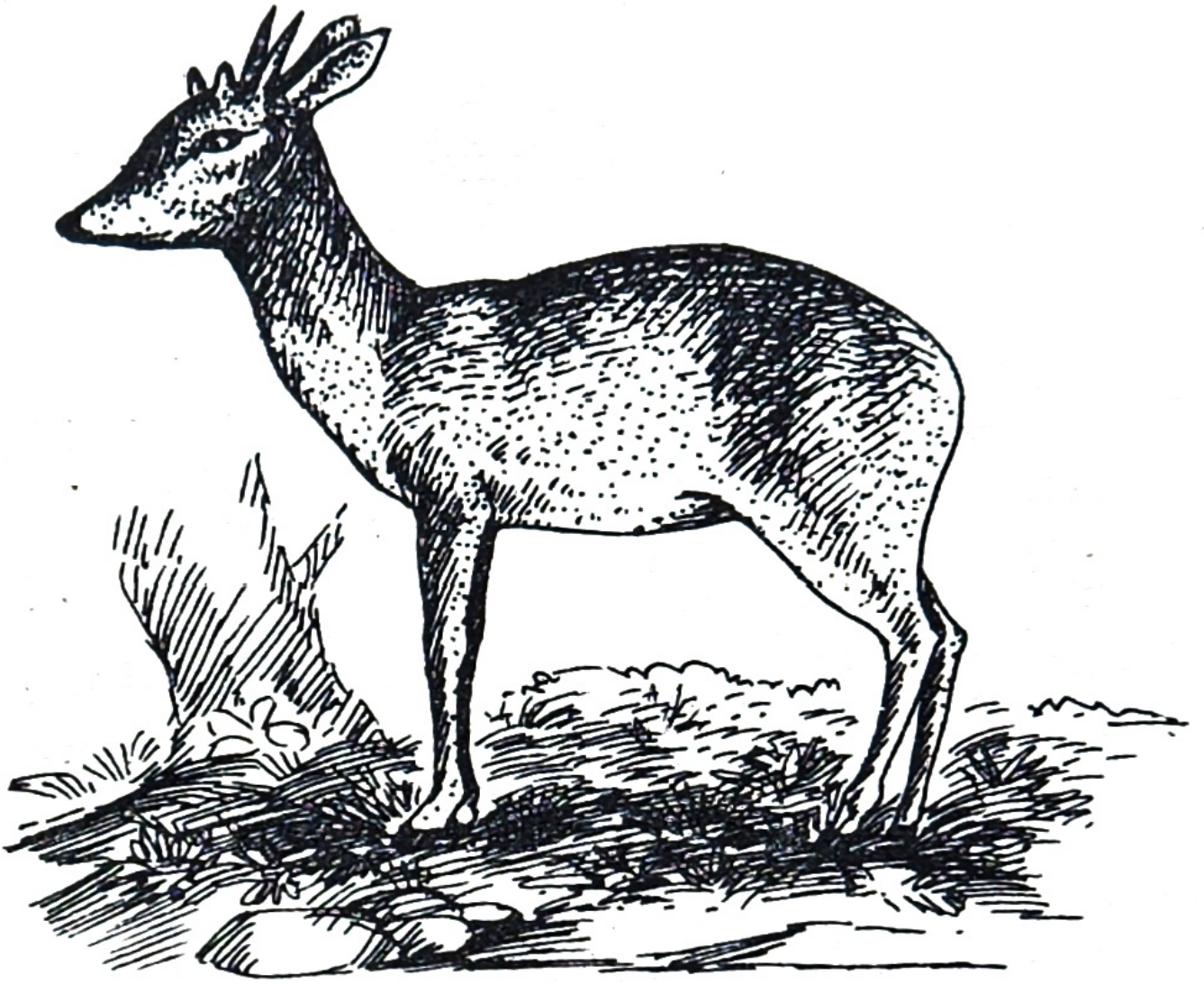
Though its main food is fish and molluscs, it also preys on birds and small mammals. Aggressive by nature, they are known to have killed goats, sheep, and even calves.

A flourishing fur trade is mainly responsible for the decline in their population, a decimation aggravated by the loss of the habitat.

FOUR-HORNED ANTELOPE *Tetracerus quadricornis*

The Four-Horned Antelope or the Chowsingha is the only animal with four horns in the world and is confined to the Indian region. Of the two pairs of horns, the front pair measures about 1 to 2.5 cm, and is positioned above the eyes; the other (longer) pair—8 to 10 cm—is placed behind the eyes. They are both smooth and straight.

The average height of a male is about 65 cm at the shoulders. The coat is coarse, of a reddish-brown hue above, and white below. A dark stripe runs down the front of each leg.



FOUR-HORNED ANTELOPE *Tetracerus quadricornis*

The Chowsingha is found in the forests of peninsula India, south of the Himalaya, except the Malabar coast. It lives in undulating country and takes shelter in tall grassland. Solitary and shy by nature, it seldom strays far from water. The breeding season is during the summer and in the rains.

Once abundant in their area of distribution, they are hardly to be seen today.

GAUR *Bos gaurus*

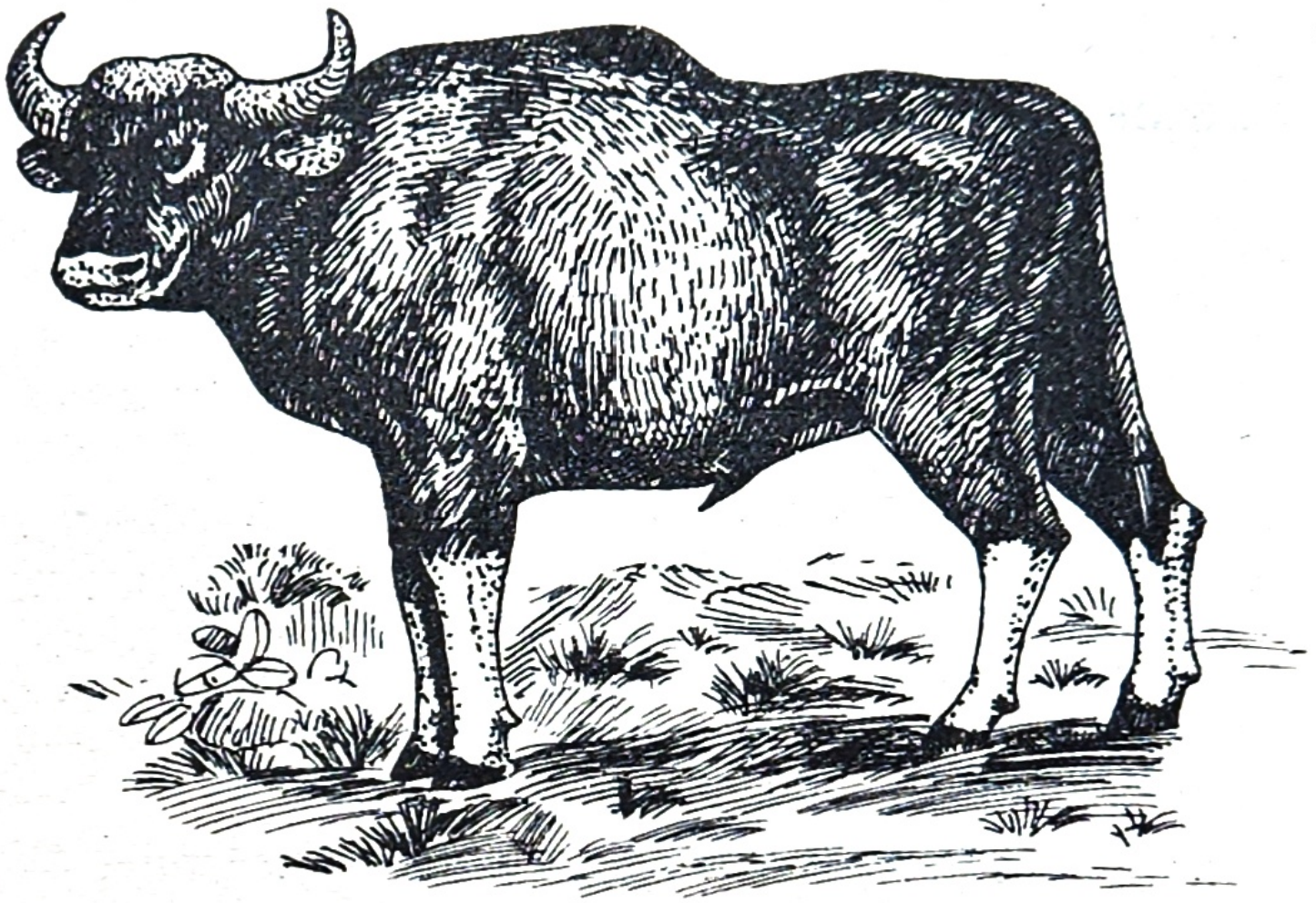
Inspite of its size, the Gaur or the Indian Bison is an admirable climber, ascending steep slopes with ease and speed.

The average height of a bull is between 175 cm to 180 cm, the cows being about 10 cm shorter. Average spread of the horns in a bull is around 85 cm, and an old bull may weigh well over 900 kg.

Very prominent in the Gaur is the muscular ridge on its shoulders, sloping down to end abruptly after the middle of the back. The general colouration in old bulls is black. Cows and young bulls are reddish-brown. Both have white stockinged feet and ashy foreheads.

The Gaur is essentially an animal of the hill forests of the Western Ghats southwards from south Maharastra, central and south-eastern peninsula, and West Bengal.

Gaur are timid and avoid contact with men, content to live in small herds consisting of a single family of 8 to 12



GAUR *Bos gaurus*

animals. Mature bulls sometimes wander away alone or in the company of other mature males.

When about to calve, the cow Gaur moves away from the herd to a secluded spot. The care of the young and leadership of the herd is left completely to the cows.

GOLDEN CAT *Felis temmincki*

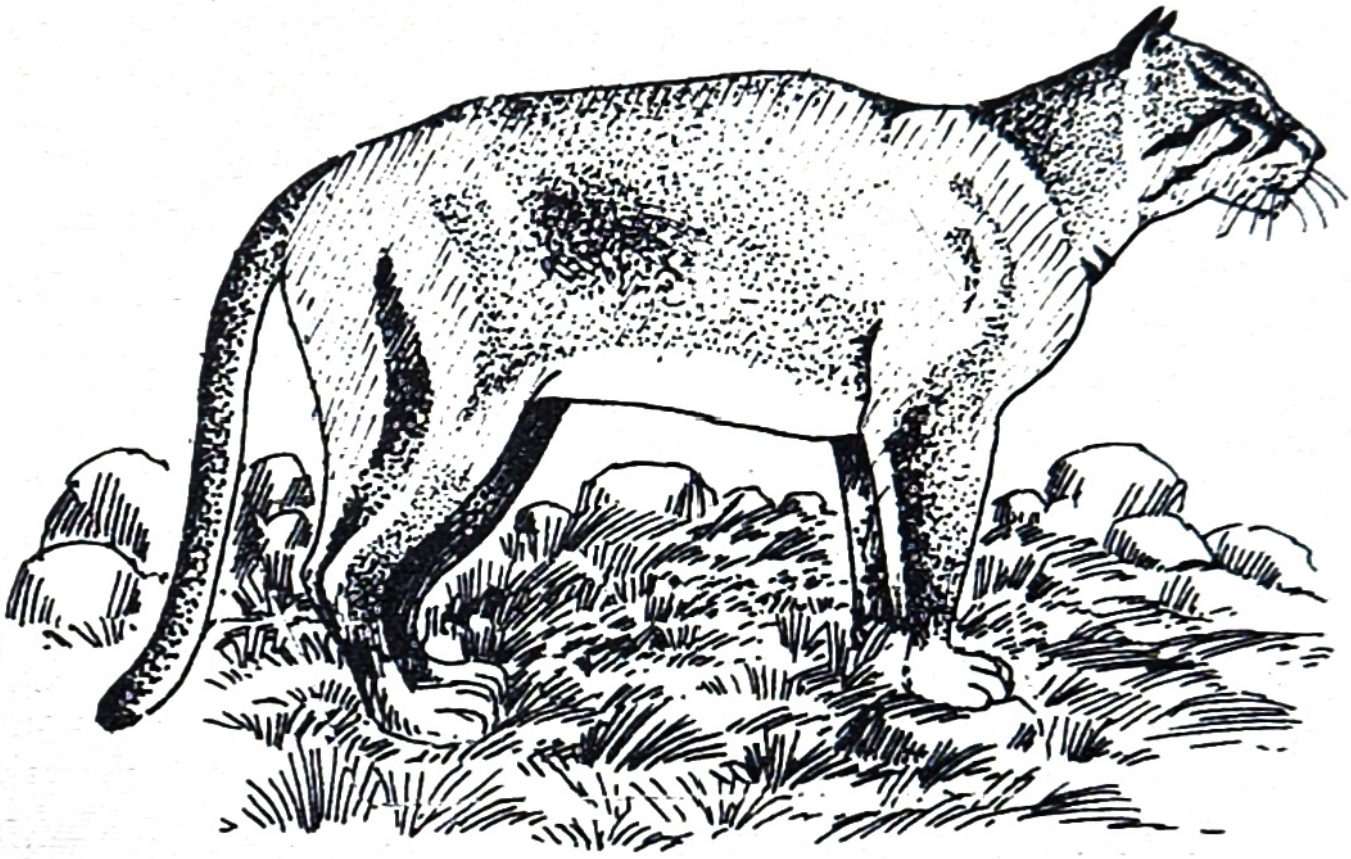
As the name suggests, the Golden Cat is rich brown or golden-brown in colour. It is sturdily built, about 120 cm in total length with a tail length of about 45 cm. Besides the Clouded Leopard, this is the largest cat in the group of smaller Oriental felines.

The Golden Cat has little or no trace of pattern on the body and the coat is short and smooth. Of a very striking appearance, this species has a white stripe along the inner side of each eye, and dark-edged white or buff cheek stripes, while the crown sports a distinctive grey stripe.

It is confined to the wet forest zones of the eastern and north-eastern parts of India, viz Sikkim and Assam.

These cats are fierce fighters, and are capable of killing sheep, goats, deer, and occasionally even calves.

Their population has declined mainly due to habitat destruction and hunting for its pelt.



GOLDEN CAT *Felis temmincki*

GOLDEN LANGUR *Presbytis geei*

The Golden Langur is similar to the Hanuman Monkey or the common Langur (about 60 to 75 cm high), except that, instead of grey, it has a cream-coloured coat which acquires a bright golden hue in sunlight. Its tail is longer than that of the other langurs.

It inhabits a strip of evergreen forest in Assam, between the Sankosh river in the West and Manas river in the east.

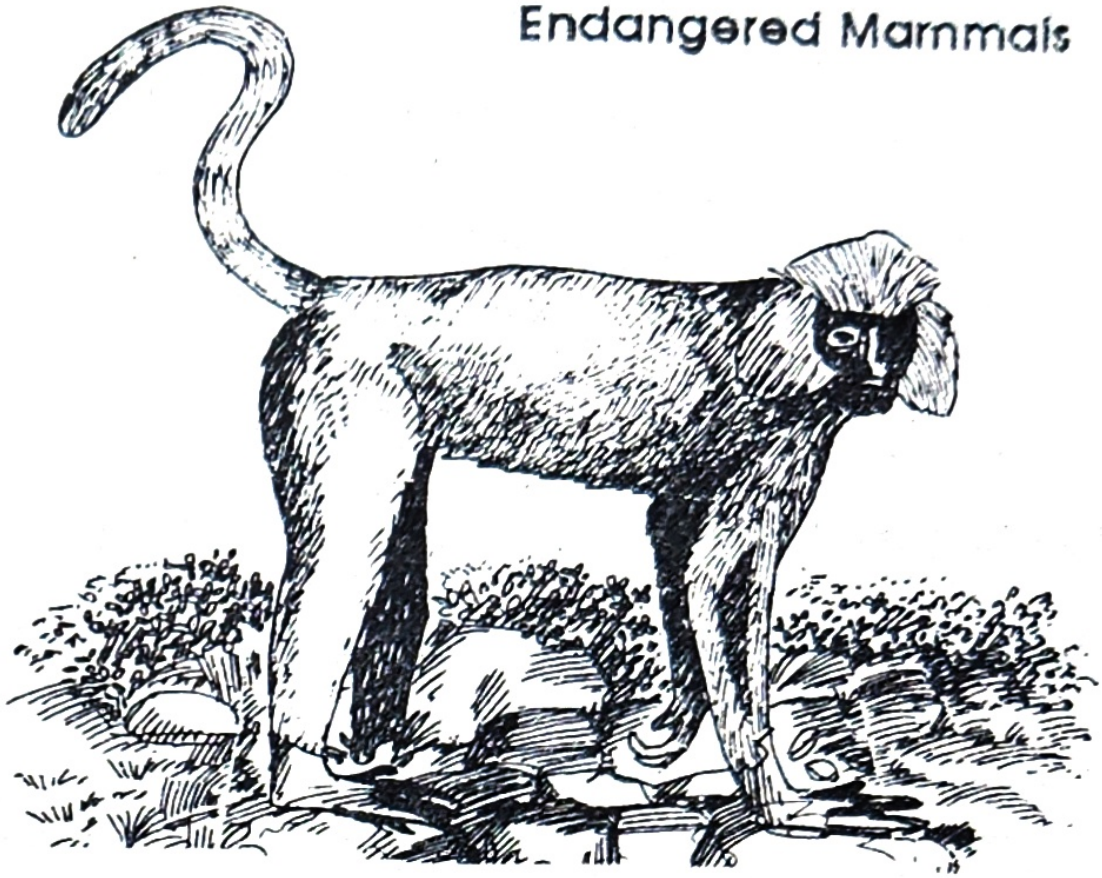
They move around in small troops of about 9 animals, feeding on flowers, fruits, and leaves.

As they are restricted to a small geographical pocket, the least disturbance of their habitat has far-reaching consequences on their numbers.

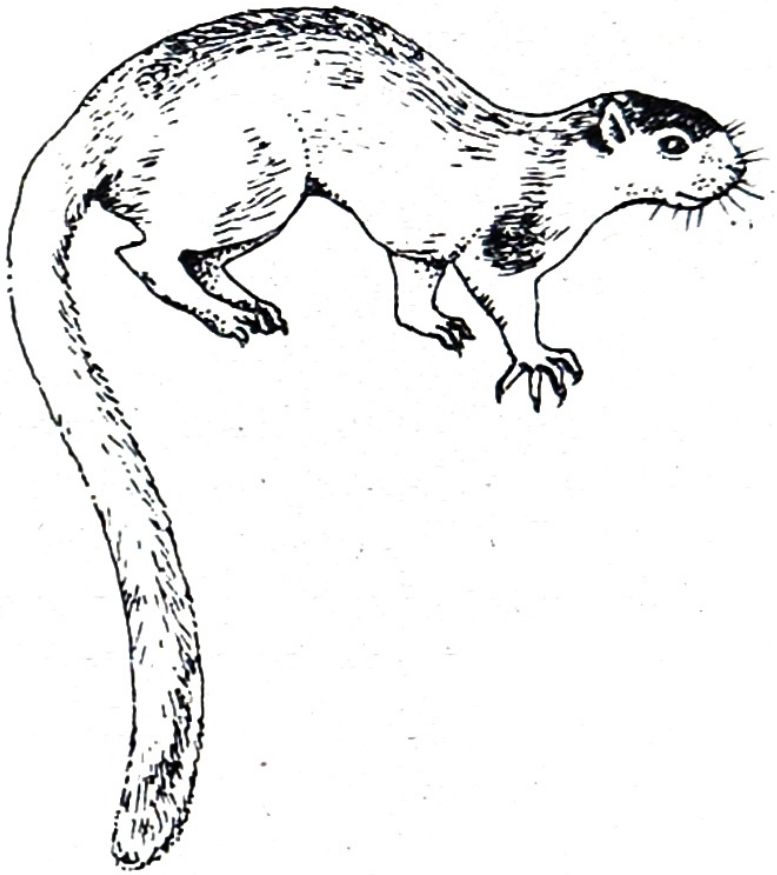
GRIZZLED GIANT SQUIRREL *Ratufa macroura*

The Grizzled Giant Squirrel has a body size of about 35 to 40 cm and an approximately 60 cm long tail, as do other giant squirrels. This species is distinctive in having the upper parts of its body brownish-grey, grizzled with white.

Extremely shy and wary by nature, this Giant Squirrel inhabits some of the forested hill ranges of south India. It keeps to the higher branches of trees, hardly ever coming down to the ground. Arboreal locomotion is achieved by leaping as much as twenty feet in a single bound. Active in the early hours of the morning and



GOLDEN LANGUR *Presbytis geei*



GRIZZLED GIANT SQUIRREL *Ratufa macroura*

evening, this agile animal retires in the afternoon to either the branches or the warmth of its nest.

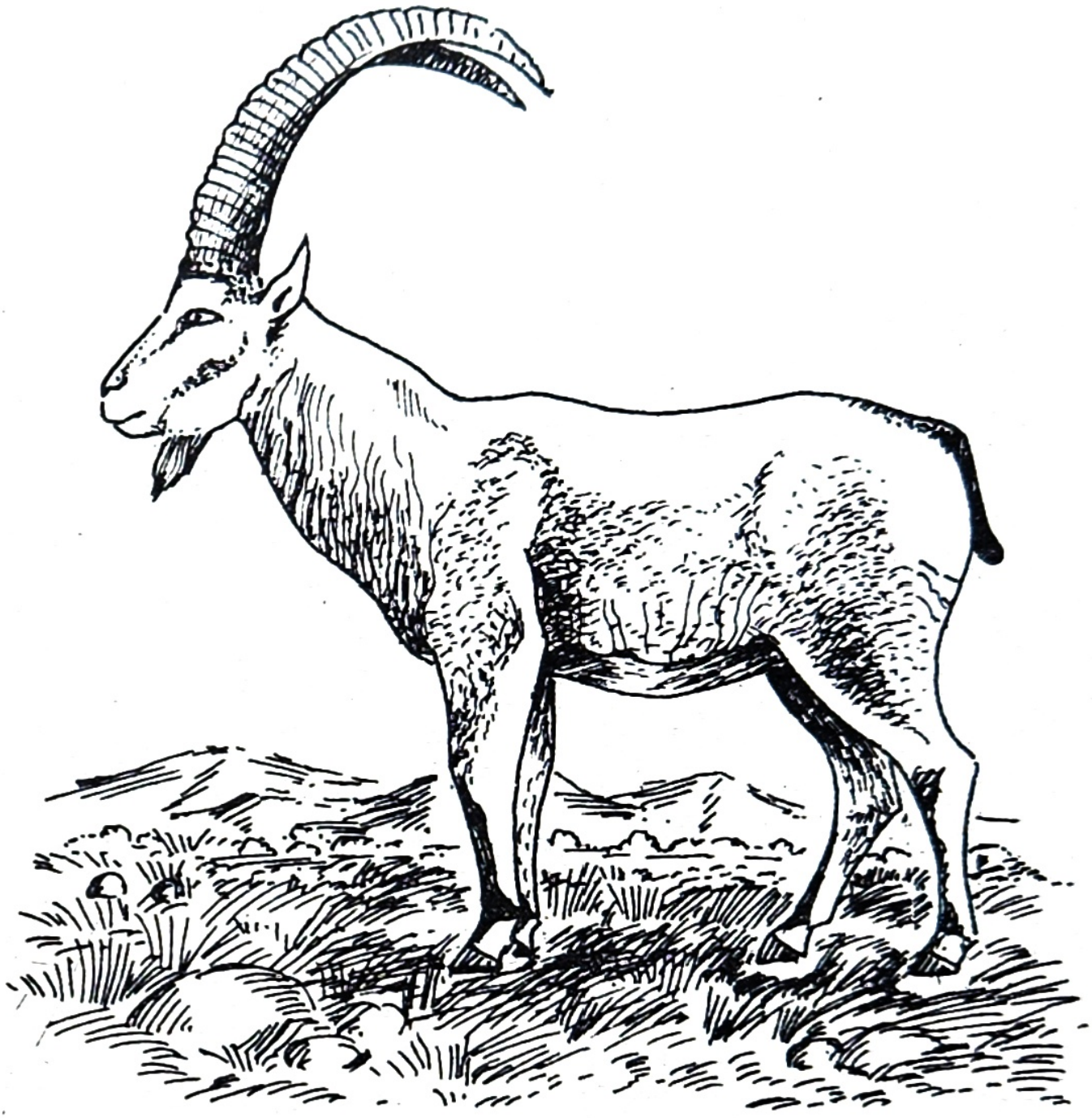
Much is not known about the breeding habits of this squirrel as it has become extremely rare and is seldom seen.

HIMALAYAN IBEX *Capra Ibex*

Of a 100 cm height, the Ibex is among the handsomest of the goats, sporting 100 to 115 cm long horns which curve backwards like a sword, and are ridged in front. In the female, body height as well as horn length are much smaller.

The buck is dark brown during summer, with irregular light patches. In winter, the coat changes to yellowish-white with a flowing white beard. Females remain yellowish-brown throughout the year. Their summer coat is short and coarse but in winter these animals develop a thick soft wool, to protect them from the severe cold.

The Ibex is a high altitude Himalayan animal, inhabiting grassy patches above the tree line in Kashmir, Himachal Pradesh, and Punjab. Herds comprise of about 12 to 40 animals, and do not descend to lower heights even in winter. They graze in the early mornings and again in the evenings. The rutting season is in October and like most other Himalayan animals, the young are born in May and June when food is in abundance.



HIMALAYAN IBEX *Capra Ibex*

They are hunted for their commercially-valuable soft woolly underfur which is used for making shawls, while mountain boots are fashioned from their skin. As a result of this, their numbers have been reduced to such an extent that these Ibex are now extremely rare.

HIMALAYAN TAHR *Hemitragus jemlahicus*

The Himalayan Tahr is a large mountain goat inhabiting the most inaccessible regions.

Standing 90 to 100 cm high (male), the Himalayan Tahr is a strong and sturdy animal with long heavy legs and narrow straight ears. The body is covered with long reddish-brown hair, with a paler mane flowing from the shoulders and neck. The horns are short and wrinkled (except at the tip), curving backwards with a total length of 30 to 40 cm.

It inhabits the rugged areas of the Himalaya, between 2000 to 4000 metres from Kashmir east to Sikkim, their favourite habitat being the precipitous terrain of towering cliffs, rocks, scrub and dense forests.

Generally only the females come out in open clearings in the evenings to graze, the males keeping to dense forest. Tahr live in herds and come down to lower levels in winter.

Their population has dwindled due to extensive killing for fur and flesh in their range of distribution.

HIMALAYAN TAHR *Hemitragus jemlahicus*

HISPID HARE *Caprolagus hispidus*

The Assam Rabbit or the Hispid Hare, as it is more commonly known, is equal to the Indian Hare in the length of its body, which is between 40 to 50 cm. The tail, however, is much shorter, being only about 2 1/2 cm long.

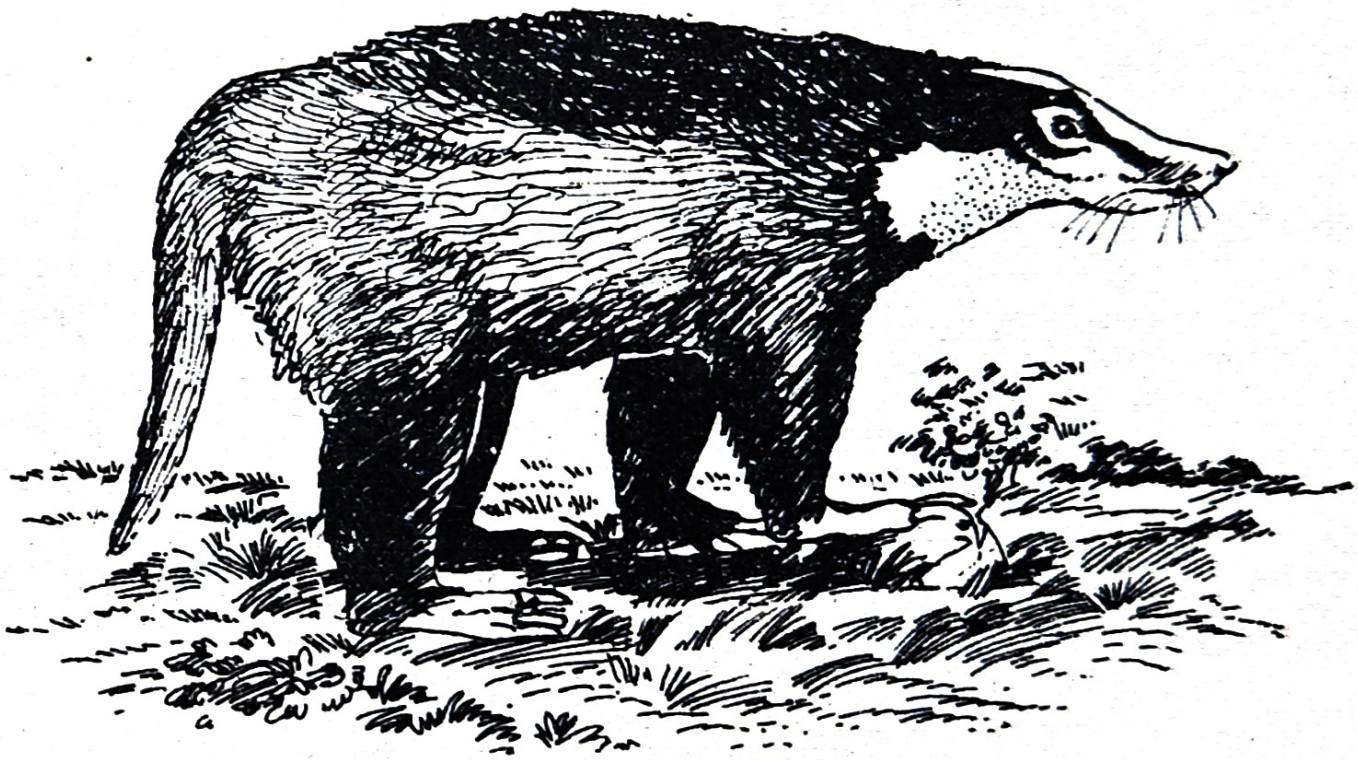
The colour above is a dark brown, a result of the intermingled black and brownish-white hair, while the underside is paler. The tail is similarly coloured. The inner fur is soft but the outside hair are coarse and bristly, thereby giving rise to the name Hispid Hare.

Little is known about the habits of this non-gregarious species but it is believed to live in pairs.

There have been sporadic sightings in the grass jungles of the Terai and the Duars (the foothills of the Himalaya).

HOG BADGER *Arctonyx collaris*

With the head and body measuring about 55-70 cm and the tail about 10-20 cm, the Hog Badger is commonly called the *Bala Suvar* (hairy pig), because of its long pig-like snout which is mobile and bare towards the end. The body, however, is more hairy and bear-like with short, stumpy legs, long powerful claws, and short ears. The overall colouration is black, fused with buff, giving it a grey tone. The head and throat are whitish with a broad black band stretching from the upperlip to the ears.



HOG BADGER *Arctonyx collaris*

Within its range of distribution—Assam and the eastern Himalaya—the Hog Badger optes for stony ground and small hills in tropical jungles, digging holes for habitation or seeking shelter in niches between rocks.

Extremely seclusive and nocturnal, it is seldom seen in the wild. Dull of sight, this omnivorous mammal relies on the sense of smell to hunt for food—fruit, and small mammals, and birds.

When faced with danger, it first discharges a foul smell from the stink glands, then fights savagely.

HOOLOCK GIBBON *Hylobates hoolock*

The Hoolock, the only ape found in India, inhabits the hilly forests of north-eastern India—Assam and east of the Brahmaputra. It has no tail and walks on two legs like a human being. It differs from gorillas and chimpanzees in that it has very long arms. Its social structure is based on the family, where every band consists of a male and a female with their young ones.

Males and young females are black but, on reaching maturity, females turn yellowish-grey. The round face is marked by a white patch across the eyebrows. The average height is around 90 cm.

Gibbons usually spend the night in a sheltered valley and wake up at dawn to sun and feed themselves. Basically arboreal, they move from tree to tree by swinging from the branches and feeding on fruits, leaves, insects, and spiders.

HOOLOCK GIBBON *Hylobates hoolock*

The young are born in winter, and lovingly cared for by the mother.

Their population has gone down due to loss of habitat and also because they are hunted by local tribes for their flesh and trapped for sale.

INDIAN ELEPHANT *Elephas maximus*

Elephants are the largest land manmals in Asia and Africa. The Indian Elephant is smaller than its African counterpart, standing approximately 2.75 metres high at the shoulders. The females are a little shorter. It does not have the large ears or the hollow back of the African species, it has four nails on each hind foot, and the trunk ends in a single 'lip'

Greyish-black with sparse hair, generally only the males have tusks which in some members are no longer than the female's. These tuskless males or *makhnas* are enormous and have well-developed trunks.

Elephants are found in the Western Ghats, from Mysore southwards, Orissa, Bihar, the Himalaya in Uttar Pradesh, West Bengal, and Assam. They inhabit tall, hilly forests where bamboo is in abundance. Extremely adaptable, they are equally at ease in cool, elevated forests as in steamy jungles.

Elephants live in herds of 5 to 50 animals or more. Big tuskers can usually be seen feeding a little away from the main herd. Mature male elephants undergo a period of excitement called *musth*, when they disassoci-

INDIAN ELEPHANT *Elephas maximus*

ate themselves from the herd, preferring to roam around alone.

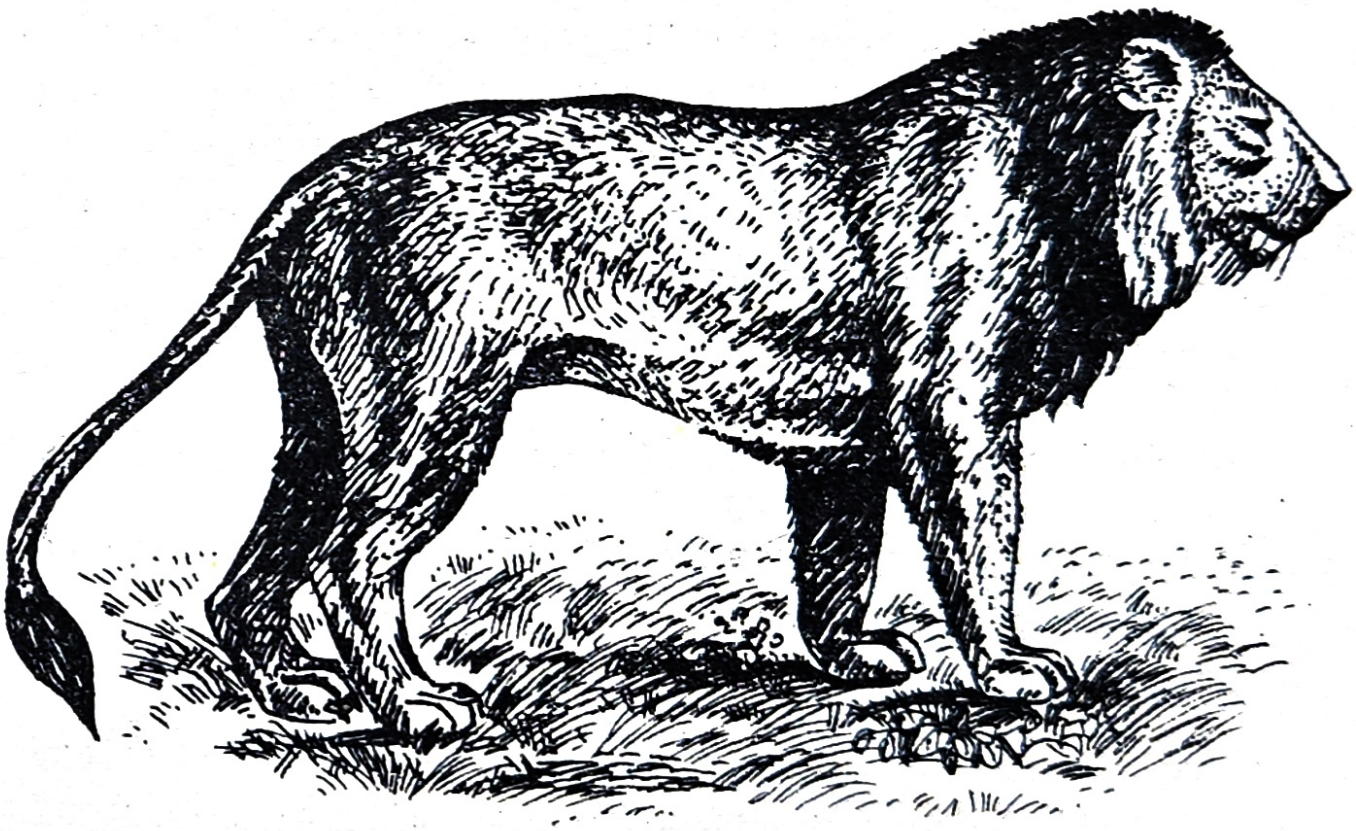
They sleep during the hot hours of the day and feed in the early mornings and evenings on grasses, leaves, stems, bamboo, plantains, and all species of crops. A full-grown elephant can eat upto 270-320 kg of green fodder per a day. Its sense of smell and hearing makes up for its poor eyesight. The young are born in autumn and are looked after by the mother, who is assisted by another female from the herd.

The elephant population has greatly diminished due to the loss of its habitat and because it is widely hunted for ivory.

INDIAN LION *Panthera leo persica*

Known as the king of the forest and a symbol of authority, the Lion is today found only in Africa and India. Once found all over the northern and central parts of our country, as far south as the Narbada river, it is now restricted to a small pocket in the Gir forest of Gujarat.

Measuring about 275 cm in length, the African and Asiatic (Indian) Lion are of the same size. The mane of the Indian Lion, however, is scantier than its African counterpart's, though the coat is fuller, and the tuft of hair at the tail end and elbow joints is longer. The mane is completely absent in the female. The cubs are often spotted. All however have a uniform yellowish-brown coat.



INDIAN LION *Panthera leo persica*

Among the big cats, the Lions can be called the most social, living in prides of 8 to 10 members, consisting of one dominant male, a number of females and young ones. They prefer open grasslands or scrub jungles where they prey on herbivores. Hunting is the prerogative of the lioness who, assisted by other members of the pride, strikes either at dawn or dust. The kill is shared by all in the pride.

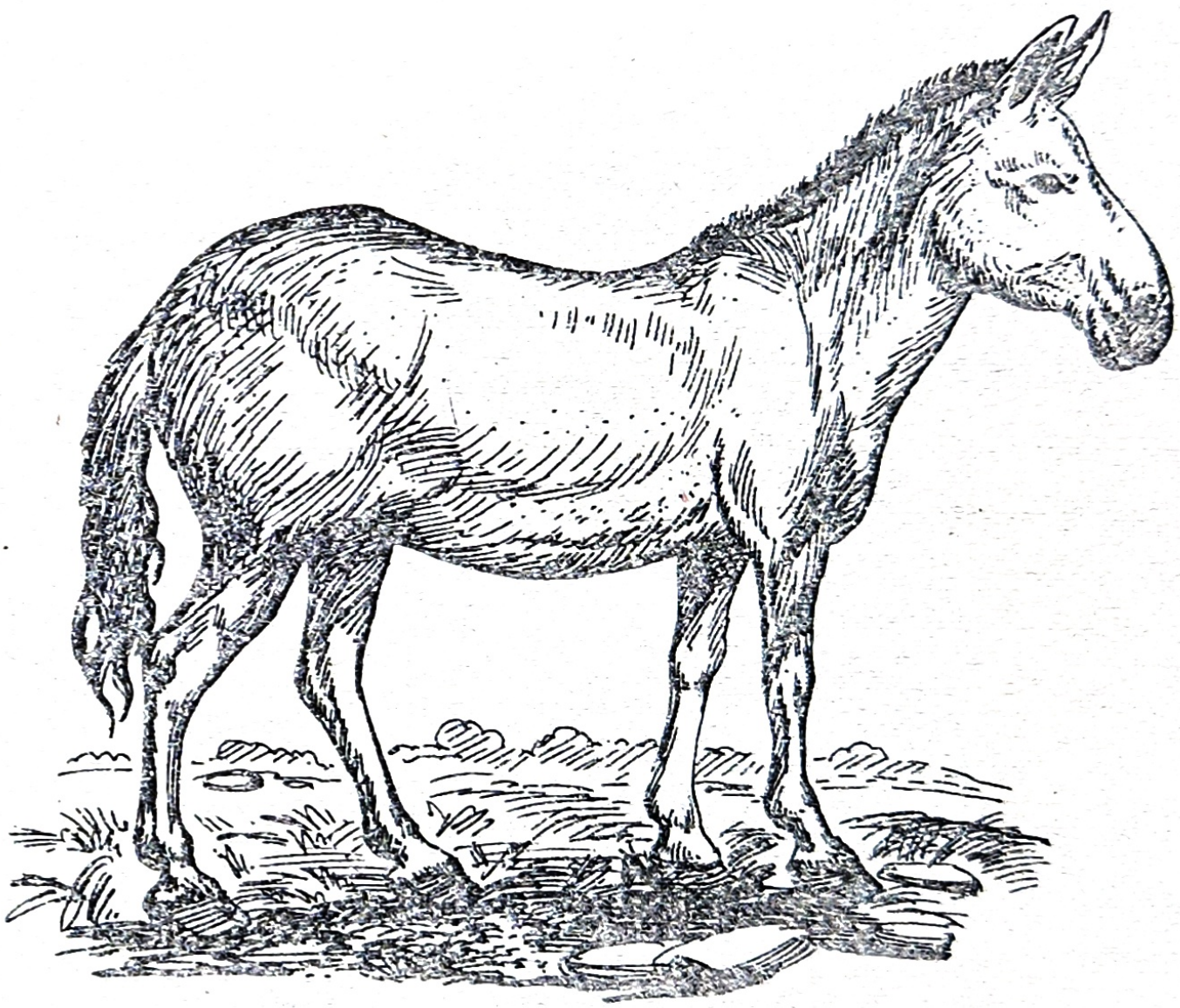
The Lion was indiscriminately hunted to the extent that by the turn of the century it had been completely wiped out from its area of distribution and currently numbers are restricted to a few individuals in the Gir forest. Over the years the population has increased, but still confined to the Gir Forest Reserve.

INDIAN WILD ASS *Equus hemionus khur*

The Indian Wild Ass is similar to the domestic ass, except that it is larger and heavier (height at shoulders, 110 cm approximately).

Its allover body colour is a sandy grey, with fawn on the sides of the rump, and white muzzle, underparts, and legs. The tail is tufted at the end and the ears are smaller than those of the domestic ass. The short, erect mane continues as a dark brown stripe all along the back to the base of the tail.

Today these animals are highly endangered and confined to the Rann of Kachchh. Here they inhabit the flat grass-covered expanses known as 'bets'. They gener-



INDIAN WILD ASS *Equus hemionus khur*

ally graze between dusk and sunrise and spend the day roaming their habitat. Mating takes place in August, September, and October, and the period of gestation is eleven months.

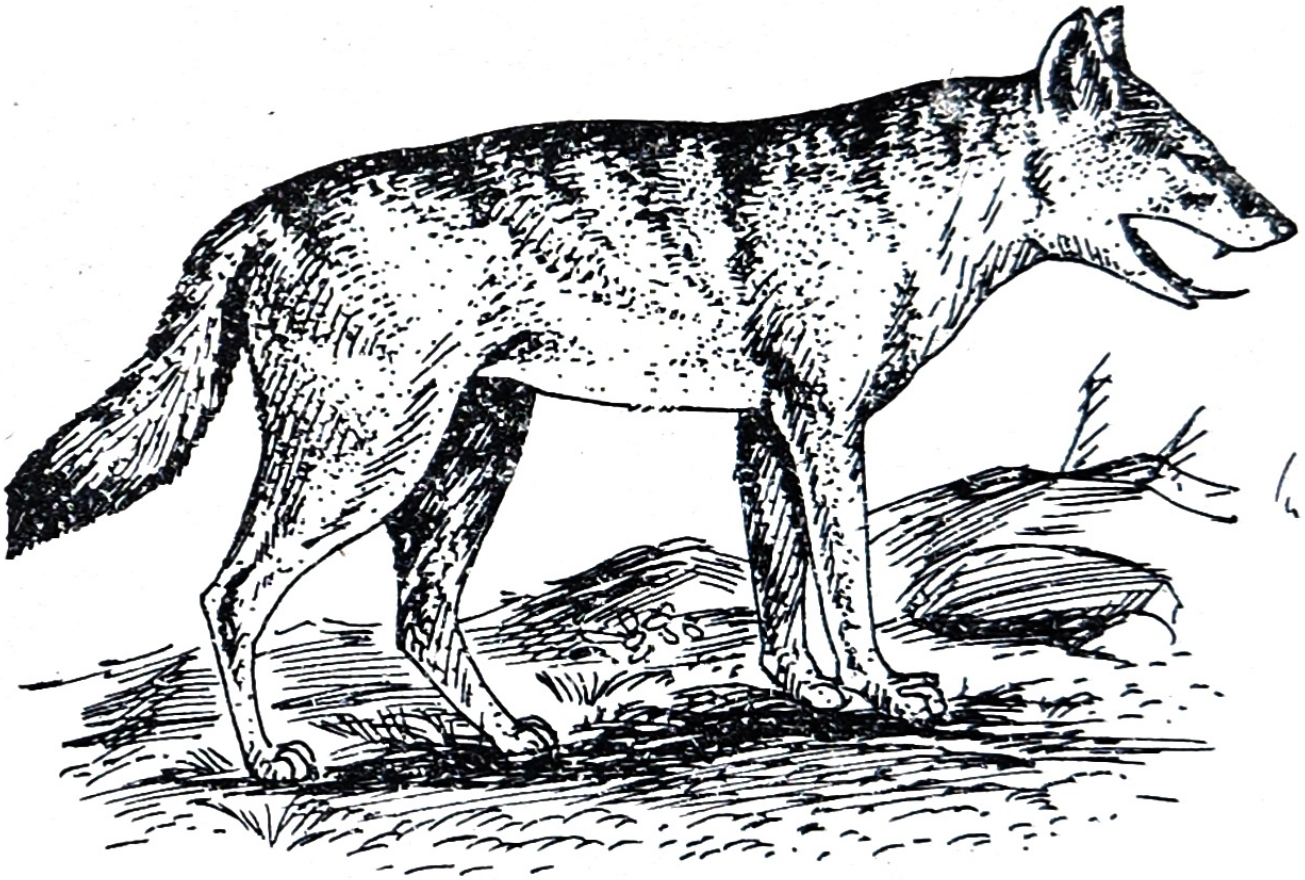
The main reason for the decreased population is overgrazing of the 'bet' by domestic cattle and sheep. Moreover, they are also susceptible to the diseases affecting domestic cattle.

INDIAN WOLF *Canis lupus*

The average height of the Indian Wolf is about 65 to 75 cm, while the body length is 90-105 cm with a 35-40 cm tail. It is similar to the Alsation or wolf dog in appearance, though much bigger in size. The general colour of the coat is a light sandy-brown mixed with black, while animals from the colder regions are darker than those from the plains.

Once found from the upper Himalaya to the desert zone and in dry open country throughout India, the wolf is today very rare in its area of distribution. However, there have been reported sightings from Maharashtra, Gujarat, Karnataka, Rajasthan, Bihar, Ladakh, and parts of Kashmir.

Wolves are social animals, living and hunting in packs. Depending on the terrain, they take shelter in caves, cavities in rocks, thickets of reed, and burrows in sand. They hunt by day and by night, preying upon deer, goat, sheep, hares, and foxes, and any other species



INDIAN WOLF *Canis lupus*

they can capture. Their diet varies according to the habitat.

Wolves residing in the plains have a post-monsoon breeding season, and the cubs are born in December; while for those in Himalayan regions, breeding takes place much later and the cubs are born in early summer.

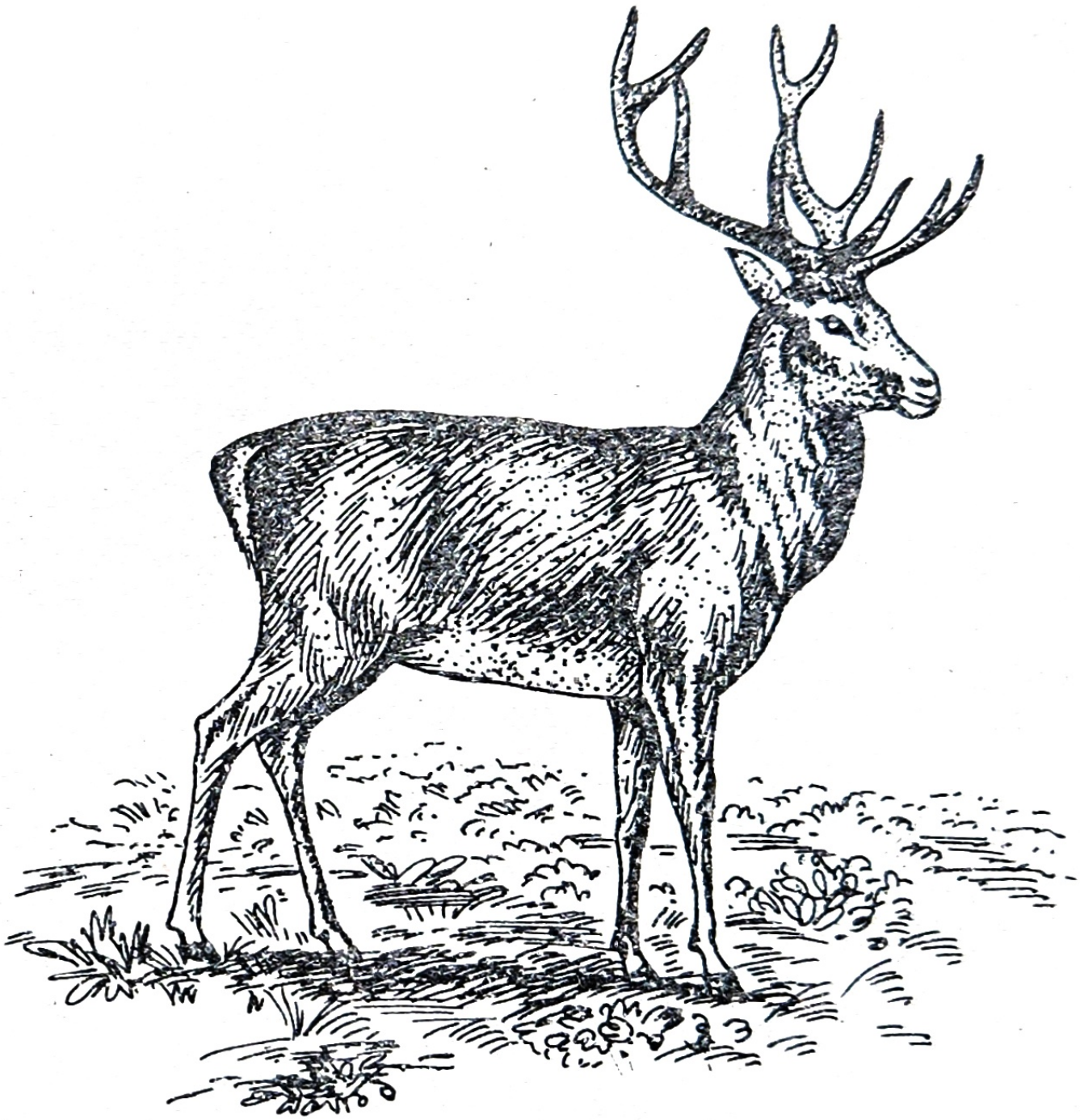
Wolves have long been persecuted in the name of cattle protection, and also because of the belief that they lift small children.

KASHMIR STAG *Cervus elaphms haughu*

Standing approximately 125 cm high. at the withers with antlers averaging about 100 cm in length, the Kashmir Stag or Hangul belongs to the Red Deer family of Europe.

The general colour of the coat ranges from light to dark brown, fading to a muddy-white on the lips, chin, underparts and buttocks. The small white patch on its rump is divided by a dark median line going down to the base of the tail. The antlers, similar to those of the Barasingha, have as many as 16 points.

These animals were once found to the north side of the valley of Kashmir, and some adjacent valleys as well,but they are now mostly confined to Dachigam near Srinagar. The Hangul is found in forests, either singly or in small parties, where it roams from one forested area to another looking for good grazing sites. The stags shed



KASHMIR STAG *Cervus elaphus hanglu*

their antlers between March and April, when they go up to the snow-line, coming down to lower levels only in the thick of winter. The rutting season is in October when the stags join the hinds.

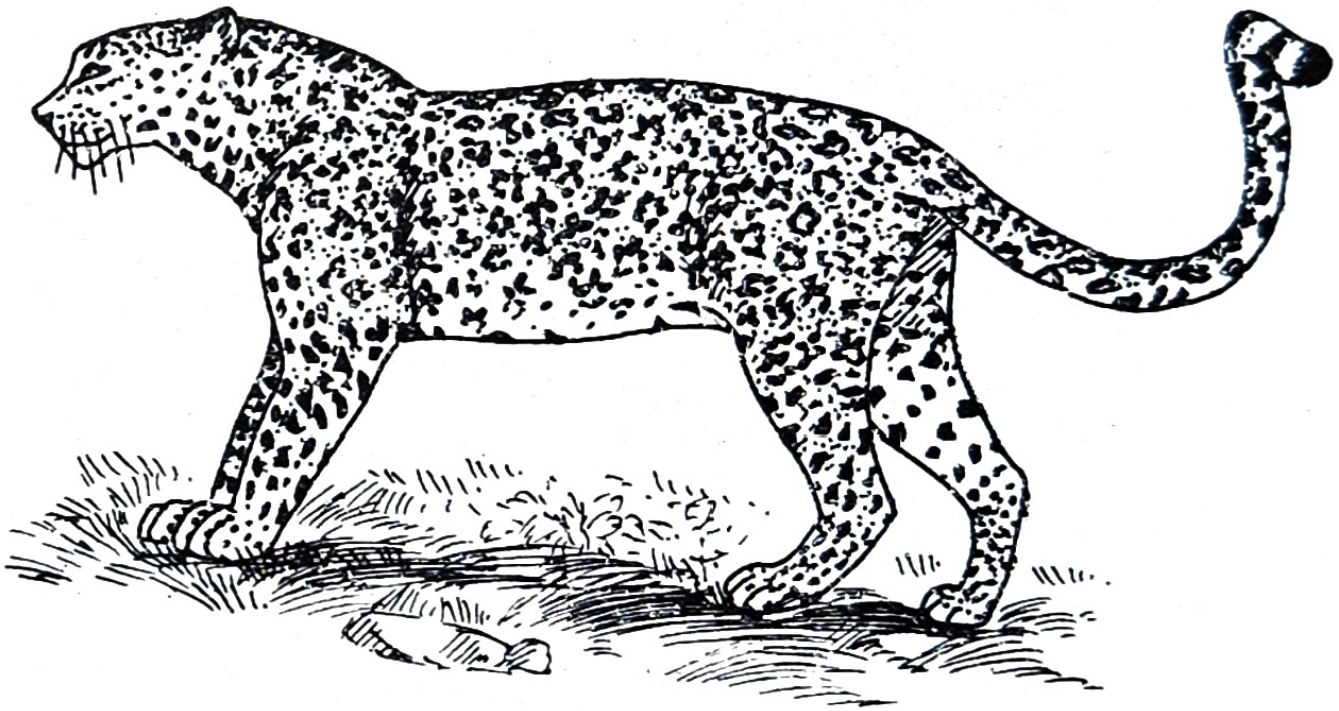
Wanton killing for its beautiful head (i.e. trophy hunting) has greatly reduced the numbers and secured for it a place on the list of endangered animals.

LEOPARD or **PANTHER** *Panthera pardus*

The cunning Leopard can be found all over India from the scrub forests of western India to the evergreen forests of south and eastern India. Sometimes in the Western Ghats one comes across a Black Leopard, which is in no way different from others of the family, except that it is melanine.

There is much variation in the colouring and size of Leopards in various parts of India, but on an average, the length of the male is about 215 cm, the female being about 30 cm shorter. The coat is a bright golden-brown with black rosettes, and the latter can be discerned on close scrutiny even in the Black Leopards.

Solitary in nature, it frequently hunts by day and feeds on small and medium-sized herbivores, large birds, monkeys, and domestic cattle and dogs from nearby villages. The Leopard has tremendous strength, as demonstrated by its ability to carry prey about 15-20 ft up into the trees, as a safequard against other predators.



LEOPARD or **PANTHER** *Panthera pardus*

Sometimes Leopards, when disabled and hence unable to catch normal prey, attack cattle in human settlements beyond the periphery of the forest. This brings them into frequent contact with man and, as such, renders them more dreaded than the tiger.

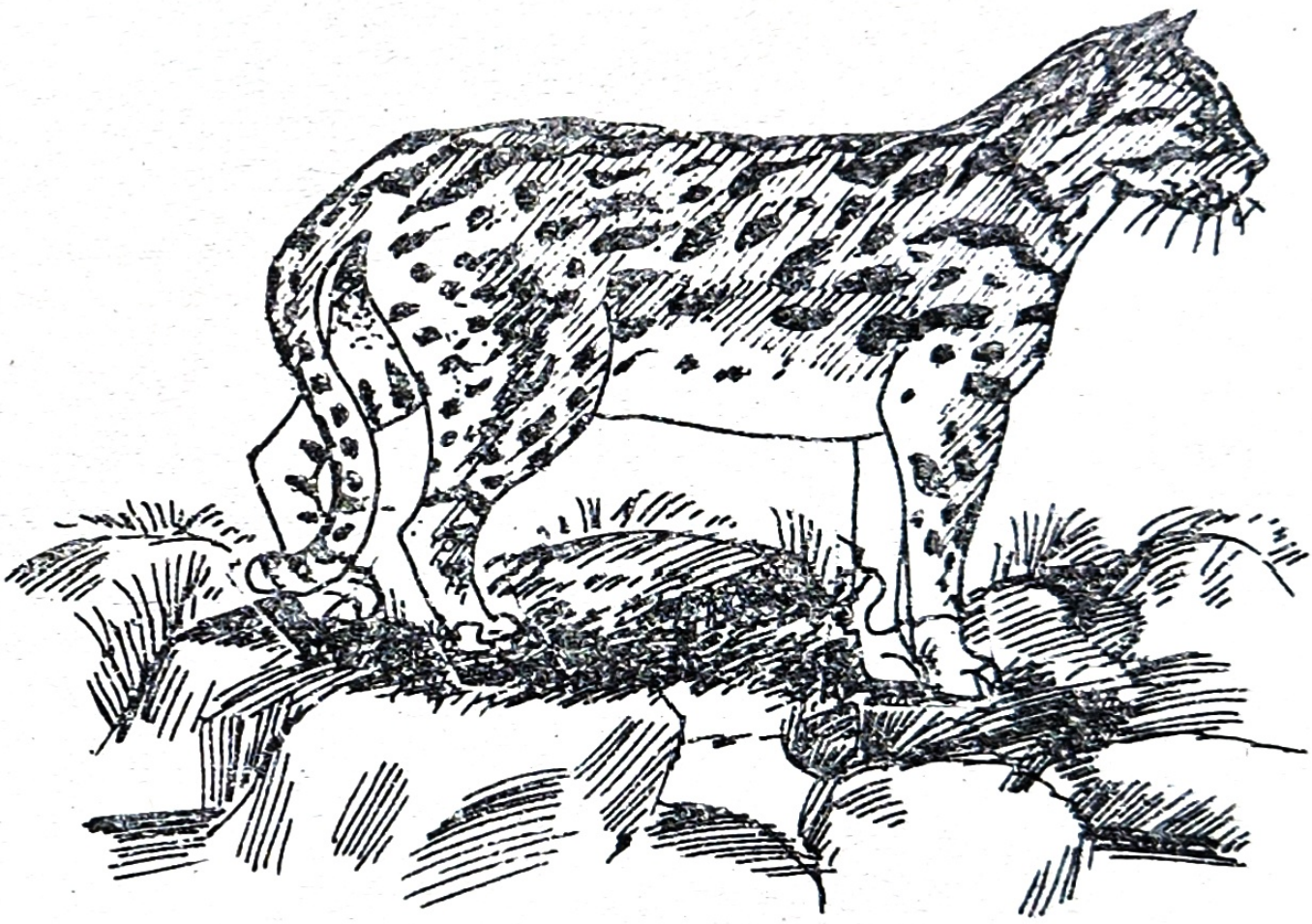
Their exotic fur has great commercial value and has led to the wanton killing of these sleek animals by poachers.

LEOPARD CAT *Felis bengalensis*

This cat is about the size of a domestic cat—except for its legs, which are somewhat longer. The average size is just under 60 cm. In colouration it resembles the Leopard—hence its name. Again like the Leopard, this species' colour varies slightly from region to region. Distinctive in the pair of horizontal stripes across its cheeks, the Leopard Cat has four bands running from the crown across the neck, and breaking into short bars and long spots on the shoulders.

The Leopard Cat is found in forests all over India, a favourite shelter being the hollows of trees. Nocturnal in habit, it is seldom seen. It hunts small birds and animals.

Besides being persecuted for its fur and because it is a potential threat to poultry, the destruction of forests near human settlements has taken a toll of the population of this beautiful species.



LEOPARD CAT *Felis bengalensis*

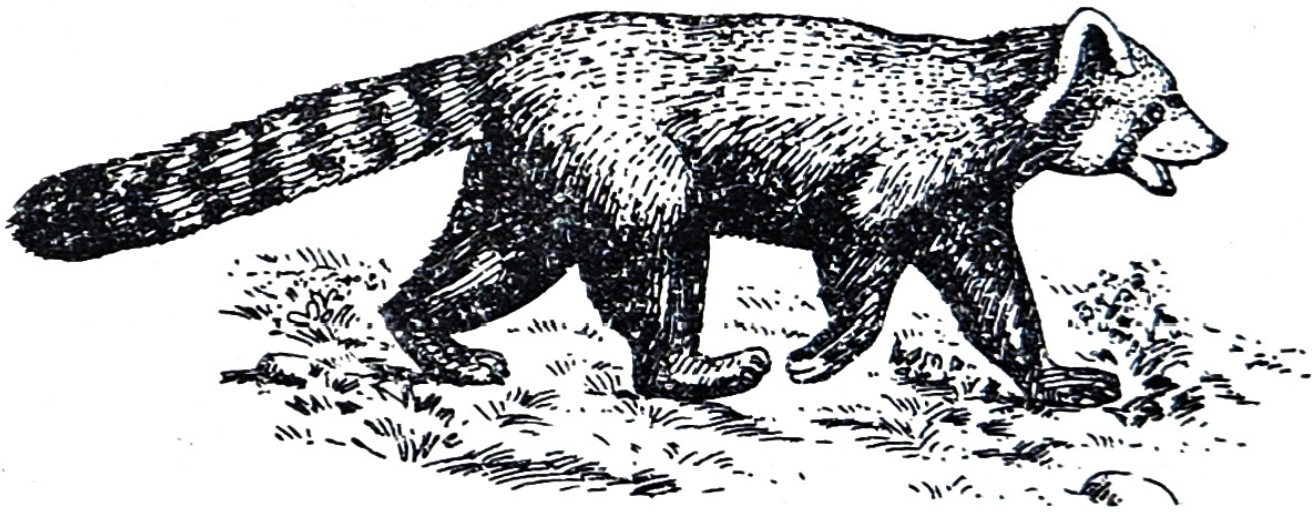
LESSER or **RED PANDA** *Ailurus fulgens*

Bear-like in appearance, the Red Panda is an elegant, easily-tamed animal. The length of the head and body is about 60 cm, and the tail is 40 cm. The head is rounded, with large, erect pointed ears, stumpy muzzle, and short legs with hair-lined soles. The colouring is vivid: a bright chestnut body with white face and lower lips, and a vertical, red stripe running from above the eye to the mouth. The tail is ringed with light to dark shades of reddish-brown and black.

It inhabits the temperate forest belt of the eastern Himalaya from Nepal east to Arunachal Pradesh.

The Red Panda is arboreal in habit, and comes down only in the late evenings and early mornings to feed on fruit, roots, tender leaves, bamboo shoots, eggs, and insects. The faculties of sight, hearing, as well as smell, are quite dull in these Pandas. At times of stress or excitement, its anal scent glands produce a strong odour. This snell may be a means of defence and also of attracting the opposite sex.

Exploited for its thick, woolly fur, it is also trapped to meet the demand of zoos. This has adversely affected its numbers and today, the Red Panda is a threatened species.



LESSER or **RED PANDA** *Ailurus fulgens*

LION-TAILED MACAQUE *Macaca silenus*

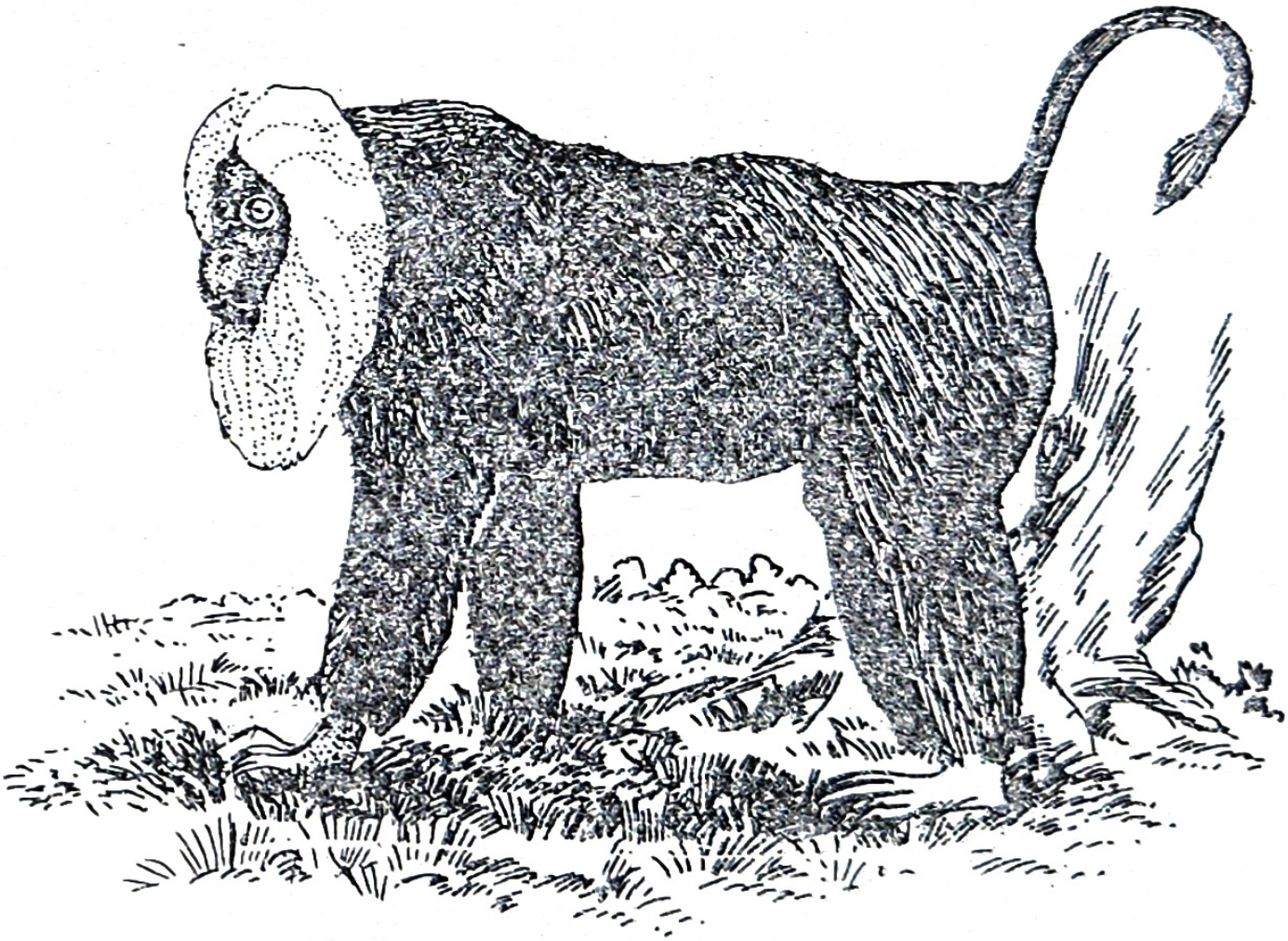
This species came into the limelight at the time of the controversy over the Silent Valley, an area that it inhabits. As the Valley is one of the least-disturbed areas of the region, the Lion-tailed Macaque has flourished here.

The head and body of the Lion-tailed Macaque measure about 50-60 cm, and its tail is 25-38 cm long. The females are slightly smaller. It can be distinguished from all the other macaques by virtue of its long, dark-grey to brownish mane growing from the temples and cheeks, and also by its glossy black coat. The tail is similar to a lion's, with a tuft of hair growing at the tip. Hence, the name.

This Macaque is found in the region spanning the Western Ghats southwards to Kerala and Kanyakumari district in Tamil Nadu where it keeps to the belt of dense evergreen tropical forests at a height of 610-1070 metres.

It is not easily sighted because of its dark colouring, and also because very little light penetrates the thick canopy of the forests. Basically a shy animal, it finds security in numbers: it lives in herds of 15-20 animals.

Destruction of habitat and poaching for its flesh (supposed to have medicinal properties) and fur have made this species highly endangered.



LION-TAILED MACAQUE *Macaca silenus*

SLENDER LORIS *Loris tardigradus*

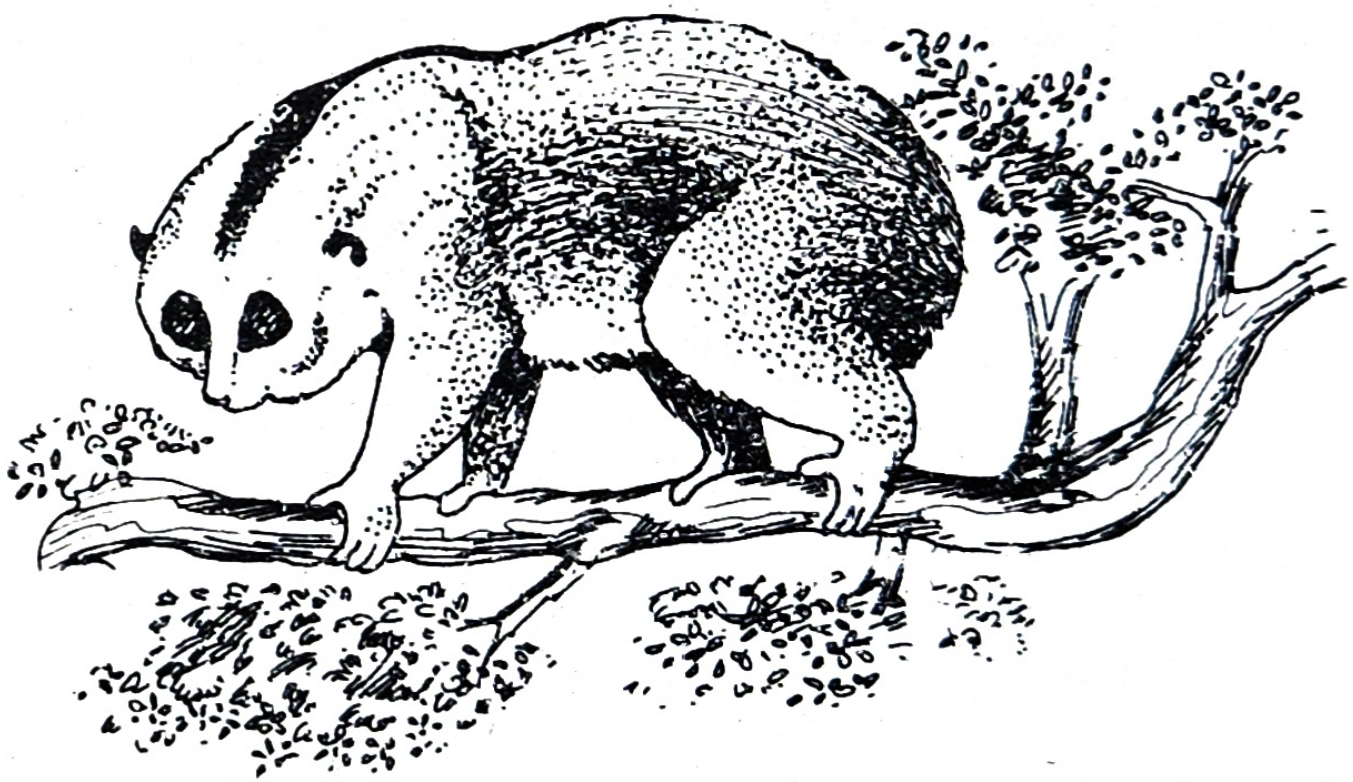
With owl-like enormous eyes, this animal is a typical lemur: its second toe is clawed, and the other toes have flat nails.

The Slender Loris is small and slender-bodied, about 20-25 cm, with a tail that is more or less completely absent or is, at best, a mere stump. It differs from the Slow Loris in that its physical features are more pronounced: the limbs are long, the ears larger, the snout more pointed, and the eyes which are circled with black or dark brown, more close-set. The fur is soft and woolly, of a dark grey or brown colour, the undersides being much paler. The muzzle is white.

Not confined to the tropical rain forests, the Slender Loris is found also in the open woodland forests of south India.

Completely nocturnal and secretive, it sleeps by day and starts foraging for food only at dusk. This is when it comes down from the trees to feed in the bushes, and crosses open stretches of ground. The food includes lantana berries, insects, lizards, small birds, and tree frogs. They suck up moisture from leaves. The movements of the Slender Loris are very slow and lazy.

These quaint animals are persecuted chiefly for their flesh and for the alleged aphrodisiacal value of the eyes.



SLENDER LORIS *Loris tardigradus*

LYNX *Felis lynx*

The long tufts of hair on the tips of its ears and the fringe of hair framing its face easily distinguish the Lynx from other cats.

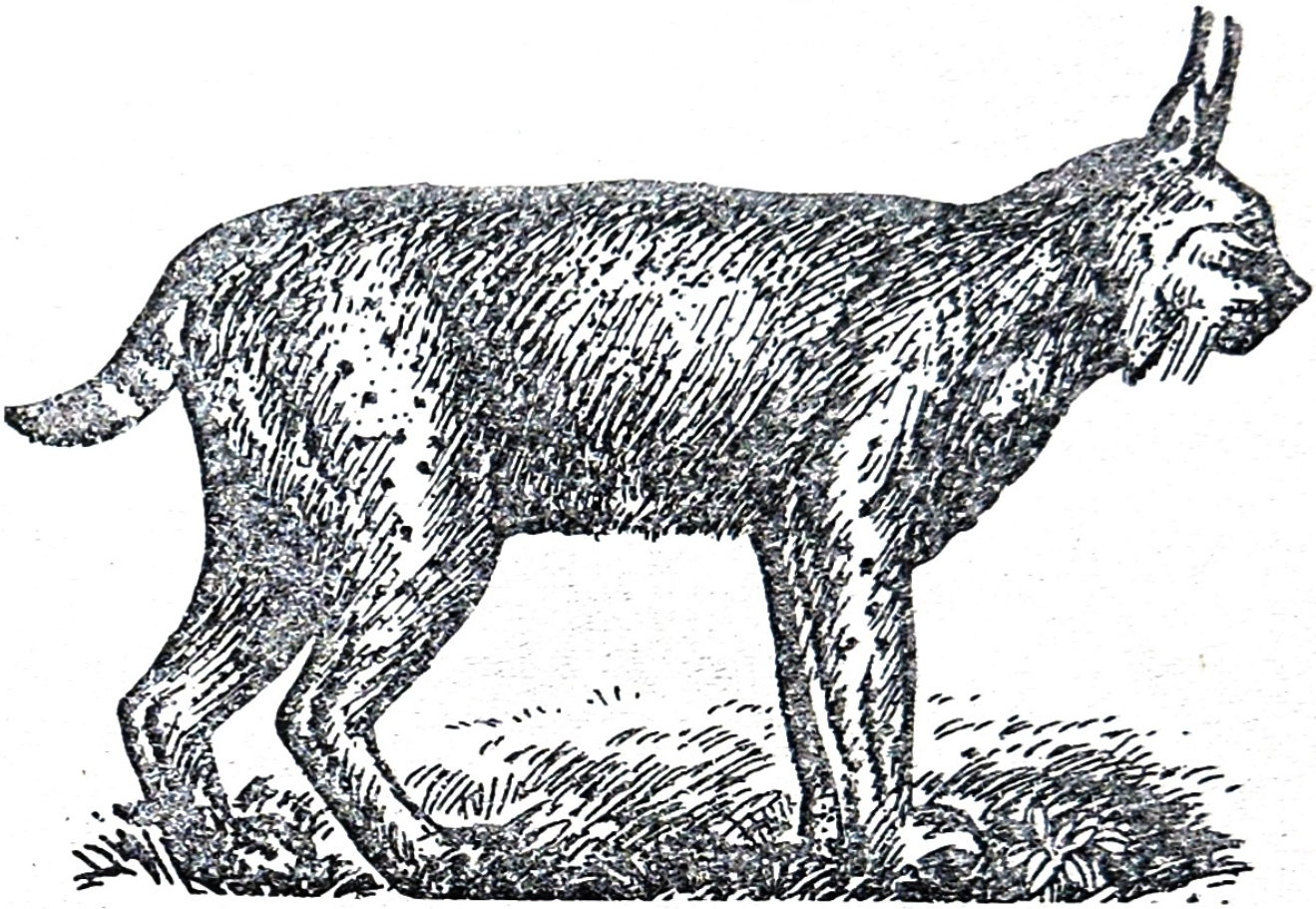
This cat measures around 80-90 cm with a 18-25 cm tail, and while spots may appear on the summer coat, these are not visible in the thick winter coat.

The Lynx is found in the arid and semi-arid tracts of western and north-western India and Ladakh. In summers it is often seen at levels between 2745 metres and 3355 metres. Living in the dense cover provided by willow scrub, reeds, and tall grass, the Lynx hunts hares, marmots, partridges, pheasants, sheep, and goats. Not much is known about the habits of this animal but it is renowned for its keen eyesight and hearing.

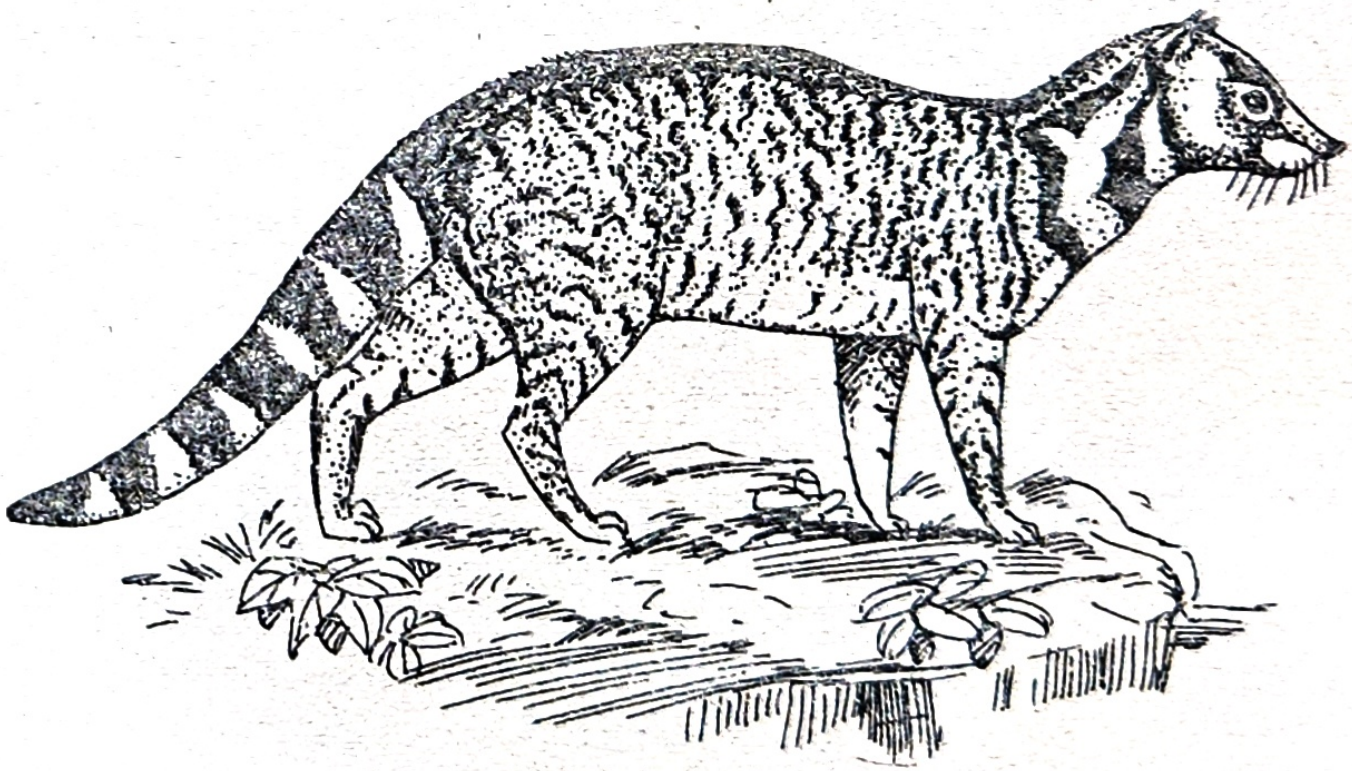
Like other members of the Cat family, the Lynx was widely hunted for its fur.

MALABAR CIVET *Viverra megaspila*

The Malabar Civet, a second species of the large civet, was once fairly common in the coastal districts of Malabar and Travancore. Now it is rarely seen and is feared to be on the verge of extinction.



LYNX *Felis lynx*



MALABAR CIVET *Viverra megaspila*

Similar to the Large Indian Civet in size, the Malabar Civet measures about 80 cm with a 45 cm tail, and its body markings are larger, blacker, and fewer in number than in the former species.

MALAYAN SUN BEAR *Helarctos malayanus*

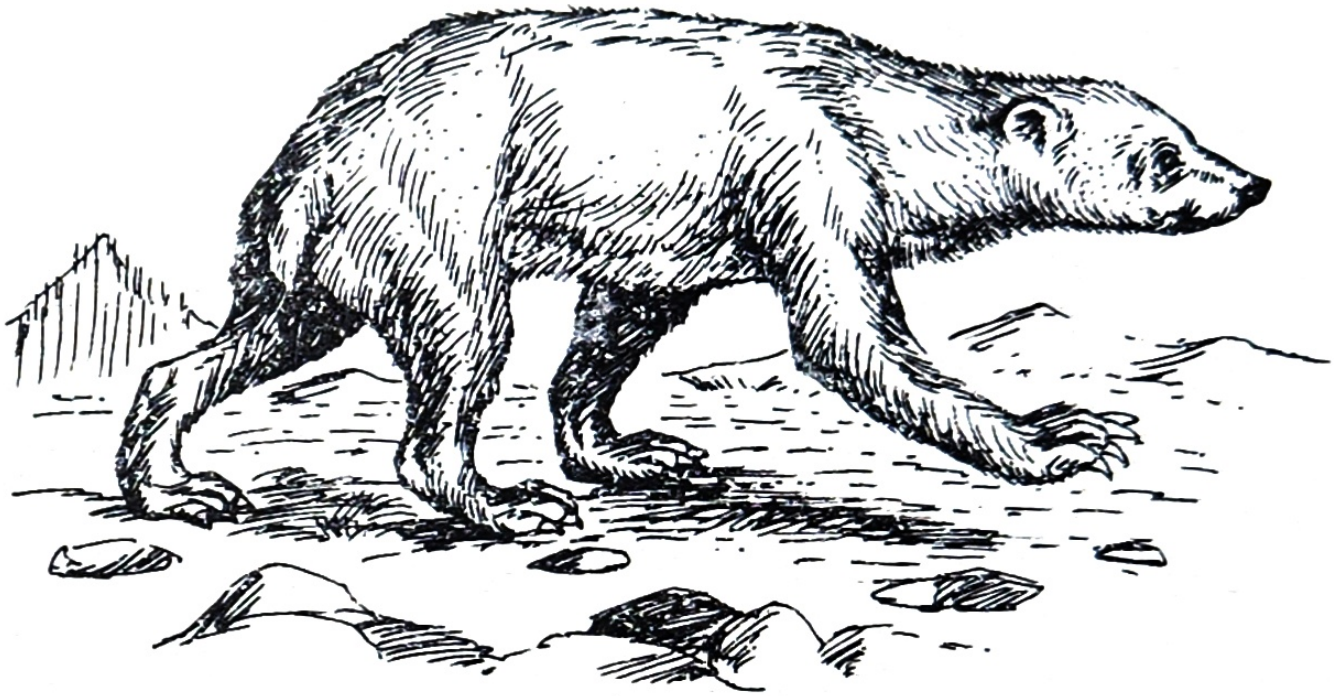
The Malayan Sun Bear, the smallest of the bear family, measures about 104-140 cm. It has acquired its name from the white crescent-shaped patch, tinged with yellow or orange, and resembling the rising sun, which adorns its chest, on an otherwise black body.

The muzzle and chin of this small bear are pale white, and the ears are short. It is arboreal and has bowed front legs and inturned paws. The long tongue and mobile lips help it to reach down holes and crevices to feed on termites.

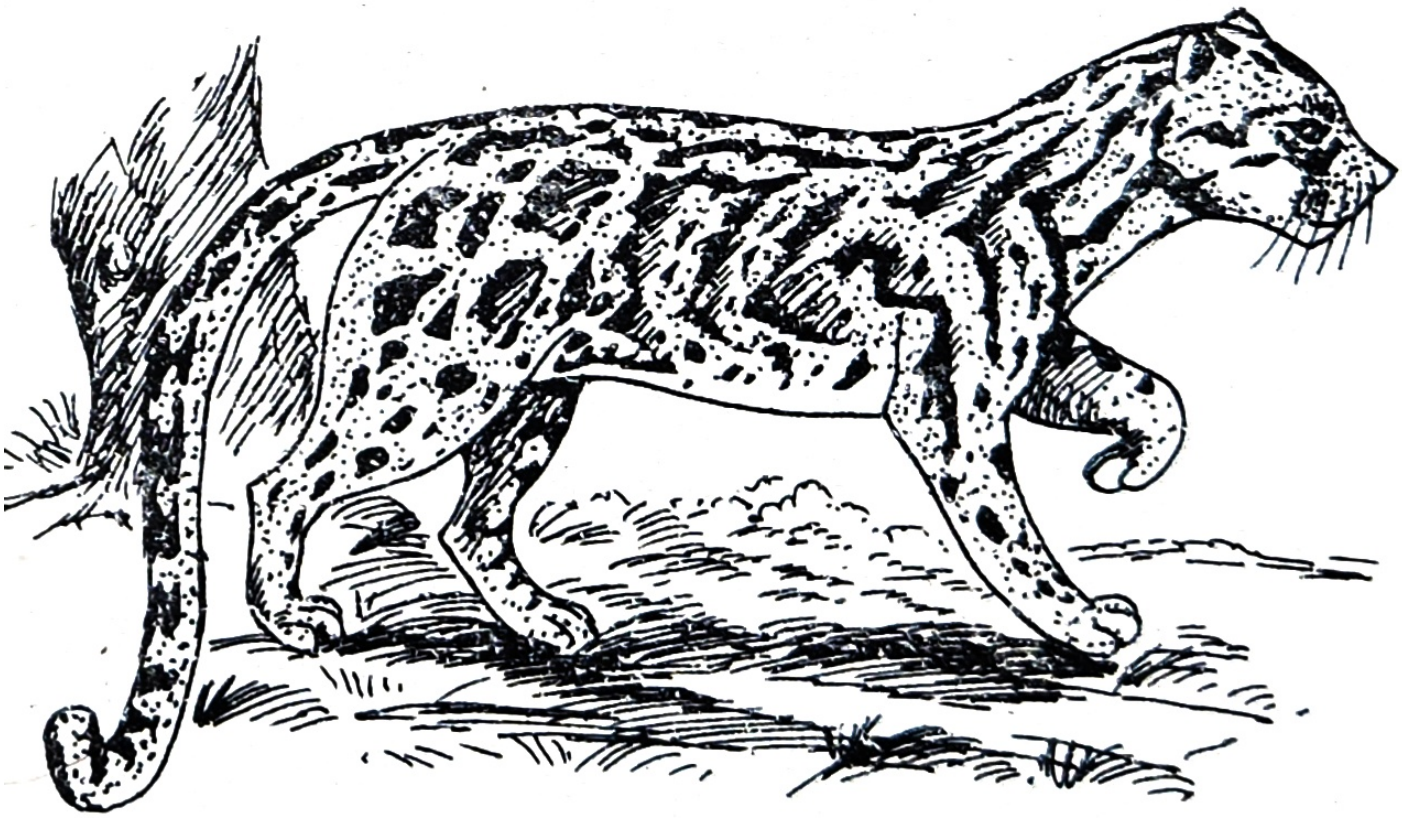
It inhabits the hilly terrain of north-eastern India, south of the river Brahmaputra. Other than the fact that it is rare even in its native habitat, not much information is available about its present population.

MARBLED CAT *Felis marmorata*

Bigger than the domestic cat —about 90 cm in length, half of which consist of the tail—the Marbled Cat is often confused with young Clouded Leopards because of similar colour and markings.



MALAYAN SUN BEAR *Helarctos malayanus*



MARBLED CAT *Felis marmorata*

As a sub-genus, the Marbled Cat is distinguished from the Leopard Cat by virtue of its shorter and broader skull, vertical chin, and better canine teeth. The coat is covered with a mixed pattern of lines, marbled patches on the flanks, and spots on the underside, limbs, and tail. The overall colour is ochre-brown and the fur is thick and long.

Believed to be completely arboreal in habit, this cat inhabits the wet forests of Assam and Sikkim, preying on small mammals like rats, squirrels, and birds.

MARKHOR *Capra falconeri*

The Markhor, one of the most majestic mountain goats of India, is unrivalled in its ability to climb the most difficult and dangerous slopes with ease.

The male stands at a height of about 100 cm at the shoulders, while the female is a little shorter. The magnificent horns are spiral and twisted, but are otherwise upright, and grow upwards to a length of 150 cm. Like all goats, it has a long, flowing beard, often reaching down to the knees. In winter, the Markhor's coat is long and rusty-grey in colour, turning reddish-brown, and shorter, in summer.

The Markhor is found in the Himalaya—from the Valley of Kashmir towards the west—at elevations of 6500-12,000ft. It is remarkably adaptable and can be found under varying conditions, though seldom above the snow-line.

MARKHOR *Capra falconeri*

Markhor live in herds, and the rutting season is between October and December. The young ones are born in May and June.

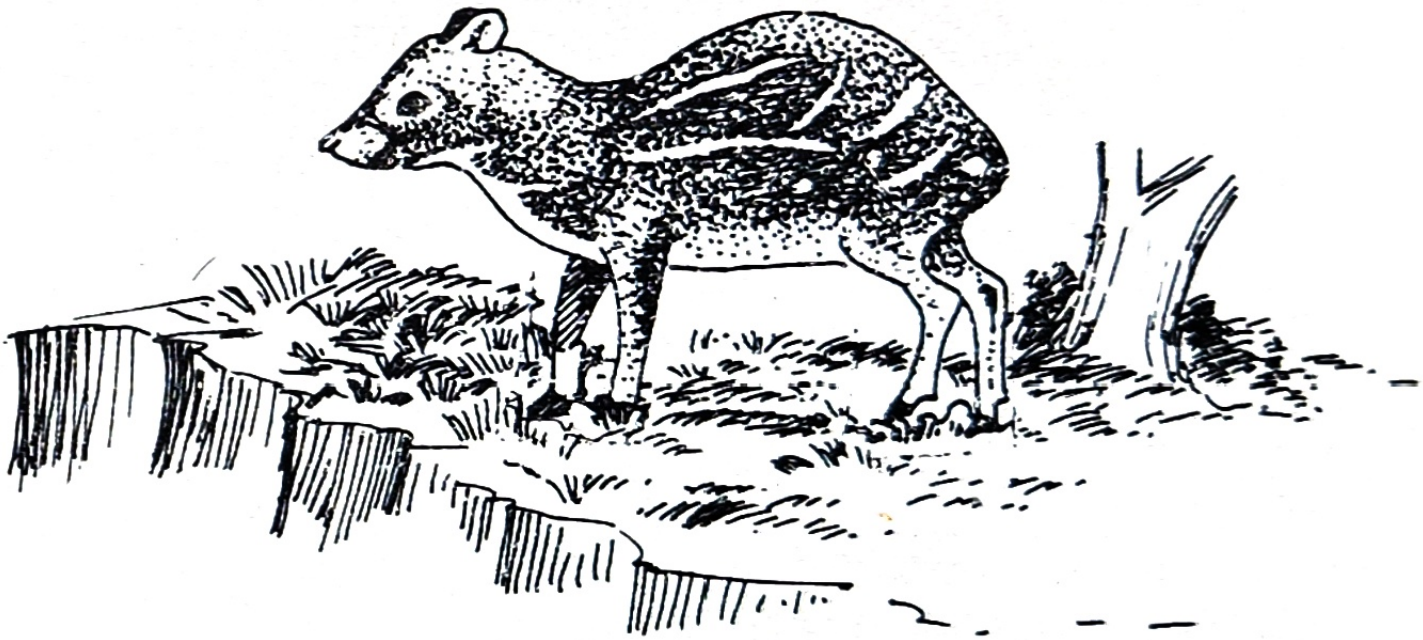
Due to wanton killing for their head and horns (which were considered prized trophies) as well as for their flesh, these animals have become rare and can be found only in isolated pockets in their range of distribution.

MOUSE DEER *Tragulus meminna*

This tiny, cloven-hooved animal measures only about 25-30 cm at the shoulders. Like other ruminants, the Mouse Deer or Chevrotain has no front teeth in the upper jaw but differs in having a three-chambered stomach. While this deer bears no antlers, tusks are conspicuous in males. The coat is brown, speckled with yellow, and the flanks are marked with white spots and lines. The Chevrotain stands higher at the hindlegs.

It inhabits the well-forested areas of southern India at elevations upto 1850 metres, where it shelters in crevices of rocks or boulders. Extremely shy, the Mouse Deer lives alone except in the breeding season. The young are born just before winter.

Once hunted for its flesh, it has now become very rare.



MOUSE DEER *Tragulus meminna*

MUSK DEER *Moschus moschiferus*

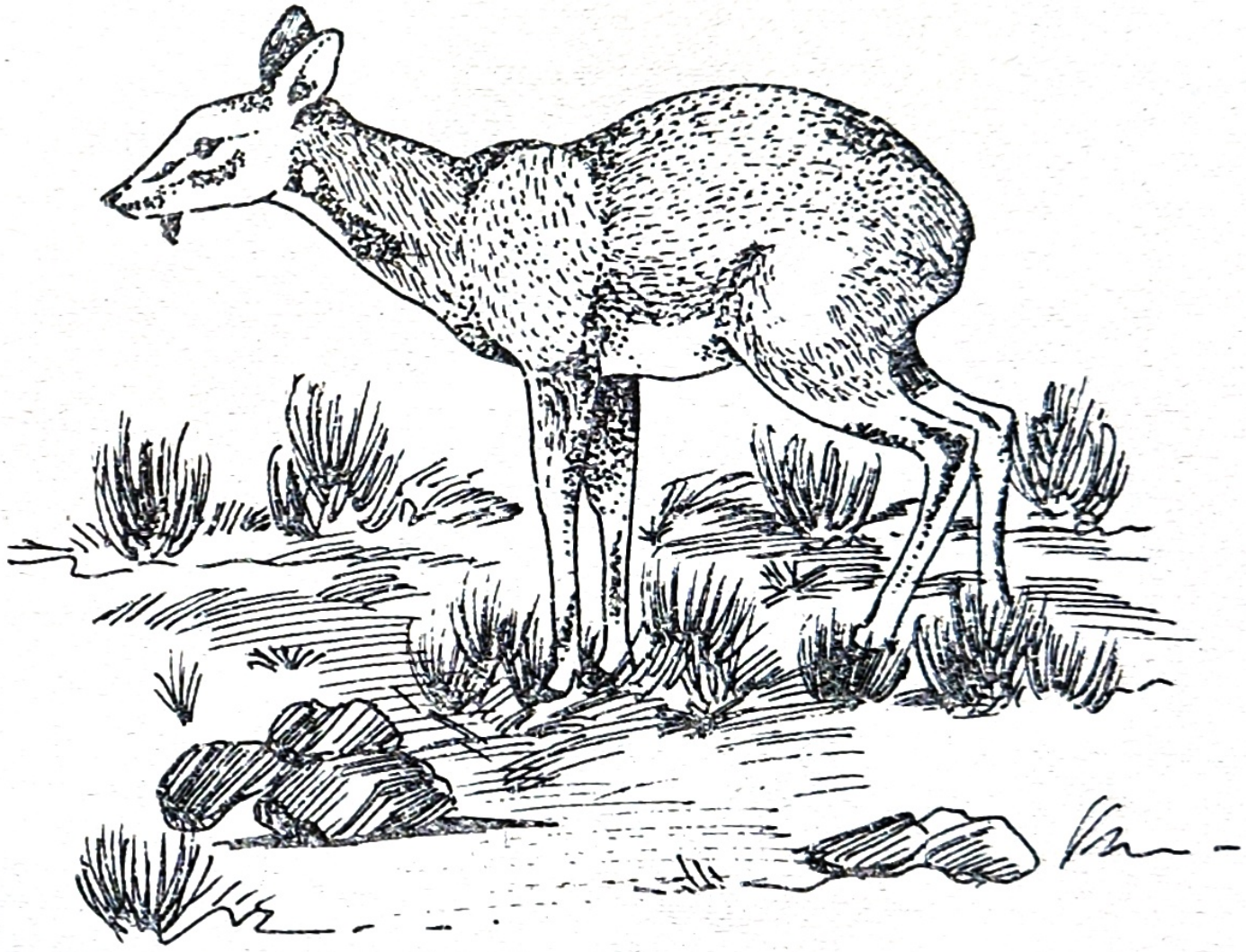
Widely known for the musk gland that it possesses, the Musk Deer may be placed, ecologically, between the deer and the antelope.

About 50 cm high at the shoulders, this little deer does not have the horns or face glands - a feature of other deer. Instead, it has a gall bladder, a caudal, and a musk gland. The canine teeth, particularly in males, are so well-developed that they protrude and are clearly visible. The tail is peculiar: it is almost buried in the long anal hairs and is almost bare except for a tuft at the base and the tip. The feet have long, pointed, central hooves and large, lateral hooves, which facilitate a firm foothold on snowy slopes and slippery rocks. A thick, bristly, dark-brown coat protects the animals in severe weather conditions.

Musk Deer live in inaccessible birch forests above the pine-tree zone in the Himalaya of Kashmir, Sikkim, and Uttar Pradesh.

These deer are extremely shy, solitary creatures, always keeping to thick cover and coming out to feed only in the mornings and evenings. The secretion of the musk gland attracts females in the breeding season (i.e. January). The young are born in June.

As a result of the hunting for the musk gland, positioned beneath the skin of the male's abdomen, the population of this highly endangered deer is fast dwindling.



MUSK DEER *Moschus moschiferus*

NILGIRI LANGUR *Presbytis johni*

The head and body of the Nilgiri Langur measures about 80 cm with an approximately 75 to 90 cm tail.

The coat is glossy black or blackish-brown with a brownish-yellow head. Females can be distinguished by a patch of white hair on the inside of the thighs.

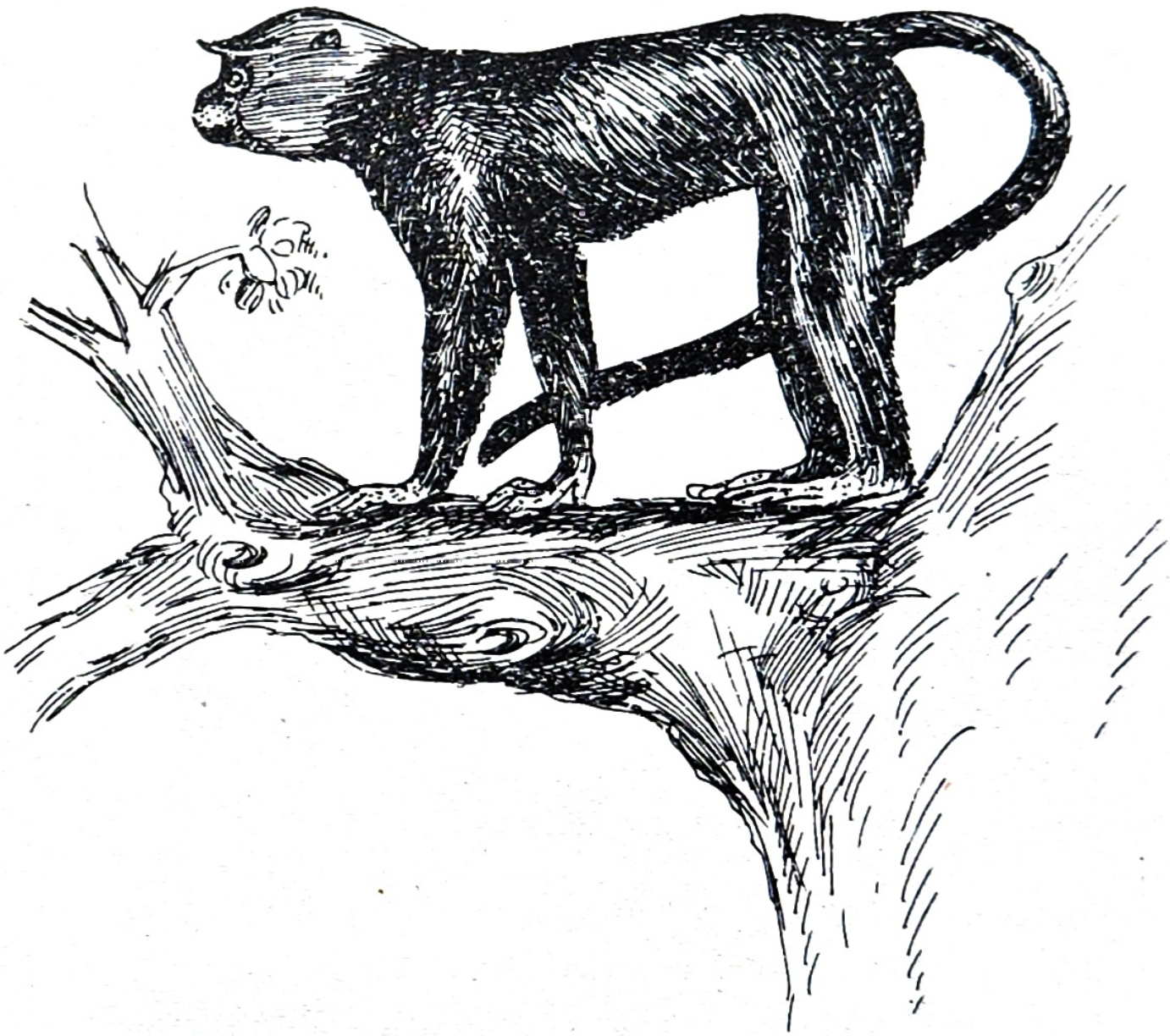
Though their favourite habitat is the dense evergreen forests of the Western Ghats from Coorg to Kanyakumari (Cape Comorin) the Nilgiri, Annamalai, Brahmagiri, Tinevelly, and Palni Hills, they often invade neighbouring gardens and cultivated woodlands as well.

Coming out to feed in the mornings and evenings, their diet is the vegetarian food common to all langurs. Newborns are mostly seen in June and September.

The beautiful fur and alleged medicinal value of its flesh and organs has made the Nilgiri Langur the most hunted species of Indian monkey. This coupled with the destruction of its habitat has made this Langur a highly endangered animal.

NILGIRI TAHR *Hemitragus hylocrius*

The Nilgiri Tahr is the only mountain goat found in south India. Slightly larger than the Himalayan Tahr, it stands 100-110 cm at the shoulders, with horns measuring between 40-45 cm.



NILGIRI LANGUR *Presbytis johni*

A close relative of the Himalayan Tahr, it can be distinguished by its short crisp coat, the round outer surface of its horns, and a single pair of teats.

While the female and young are grey in colour, the male is a deep brown. They have a lighter patch on the back, commonly called the saddle patch. The horns, shorter in the female, are deeply wrinkled and grow straight upwards, to curve down sharply at the tip.

Completely at home on precipitous rocky terrain, this agile goat is found from the Nilgiri to the Annamalai hills, and southwards along the Western Ghats at elevations of 1220-1830 metres.

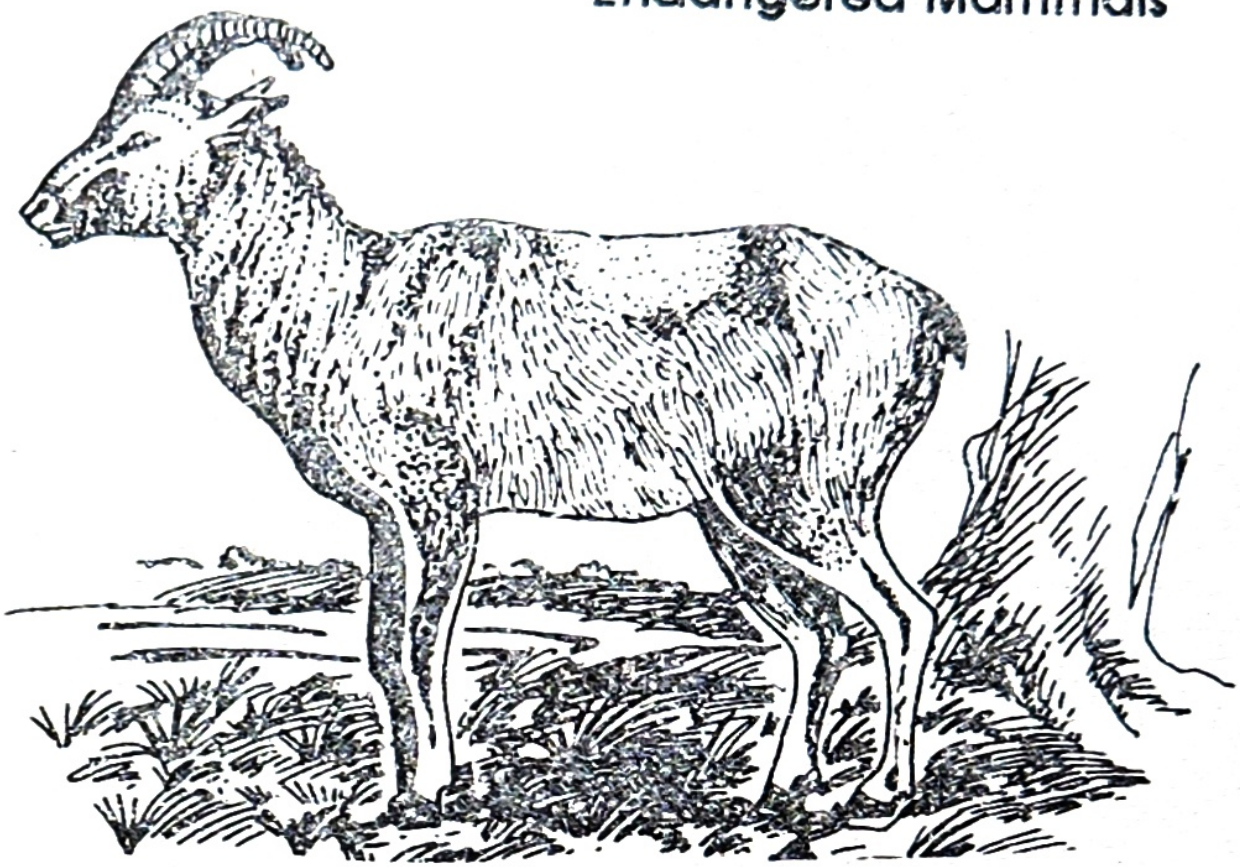
Grazing in the early morning and late afternoon, this animal, like other goats, lives in flocks of 6 to 10.

Habitat loss and hunting for flesh have greatly reduced their numbers.

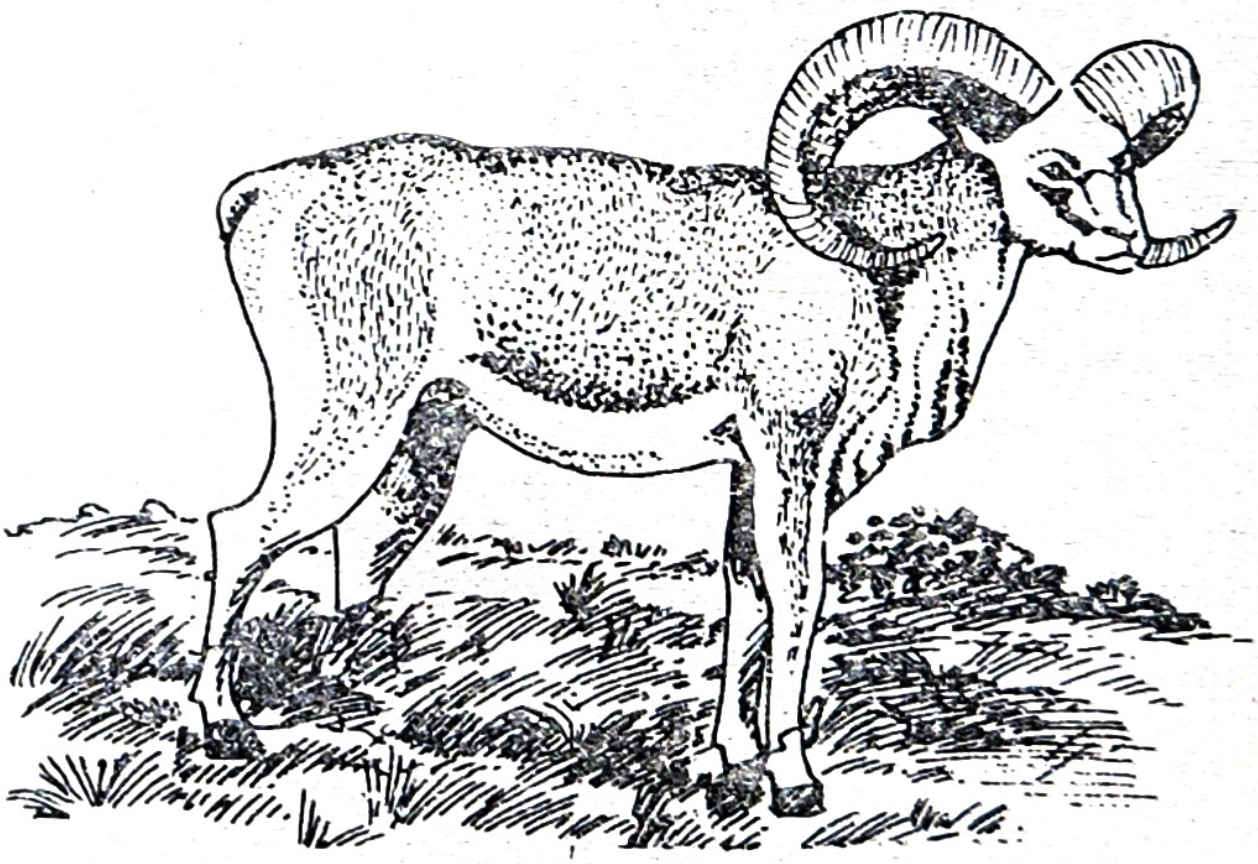
NAYAN *Ovis ammon hodgsoni*

The Nayan or the Great Tibetan Sheep is the largest living sheep found in the Himalaya, standing at a height of 110 to 120 cm at the shoulders with horns measuring between 90 and 100 cm.

Resembling an antelope in its graceful build, the Nayan is light brown in colour, with dark shoulders and white underparts. Old rams often have a white mane which



NILGIRI TAHR *Hemitragus hylocrius*



NAYAN *Ovis ammon hodgsoni*

they shed in summer. Their horns, smaller in the females, never exceed a single circle.

Inhabiting treeless country above 4575 metres in Ladakh and Sikkim, the Nayan often comes down to the Spiti Valley and Kumaon hills in winter.

Essentially migratory, this sheep wanders to wherever food and water can be got in the desolate country that it inhabits. The young are born in May and June when both sexes separate. They rejoin only in autumn.

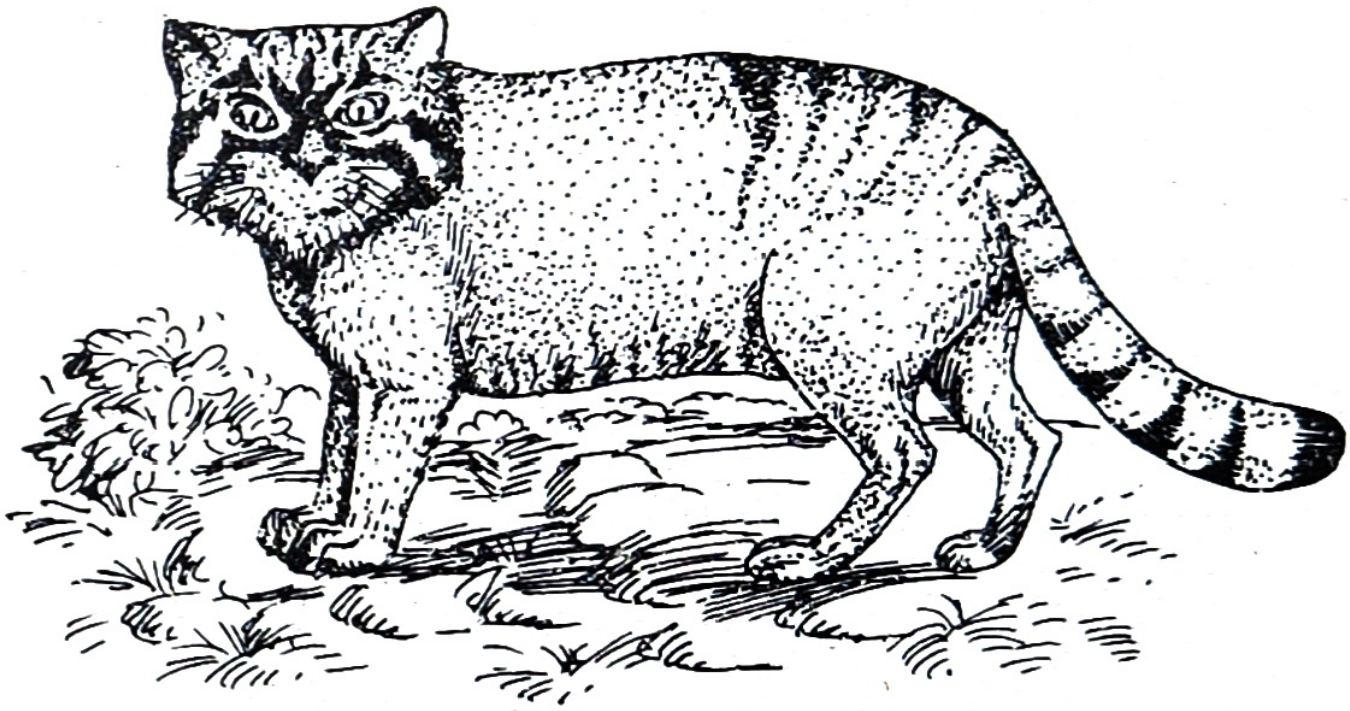
Overhunting has considerably reduced their population.

PALLAS'S CAT *Felis manul*

The Pallas's Cat is the size of a domestic cat with a distinctly longer tail.

The head is broad with a low forehead and small widely separated years. The face is grey and the rest of the body is silvery, with faint to dark stripes an the loins. The tail is similarly ringed, and it culminates in a black tip. The hair on the chest, belly, and thighs is longer than on the rest of the body. This gives the animal protection among the snow and the rocks of Jammu and Kashmir.

Not much is known about the cat as it is extremely rare



PALLAS'S CAT *Felis manul*

INDIAN PANGOLIN *Manis crassicaudata*

and

CHINESE PANGOLIN *Manis pentadactyla*

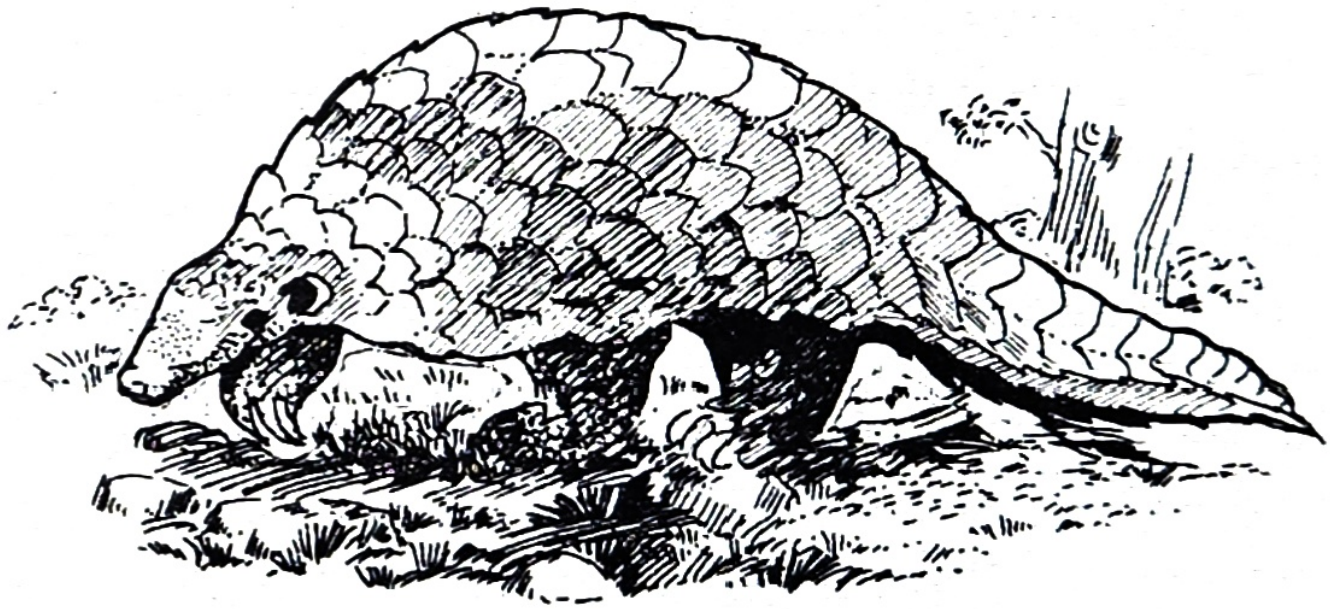
The most distinctive characteristic of a pangolin is its armour of protecting scales, which cover the entire upper part of its body, including the tail. The undersurface of its body is scantily covered with coarse bristle-like hair.

The Indian Pangolin measures around 60-75 cm, with a tail 45 cm (approx) long, whereas the Chinese Pangolin measure about 48-58 cm, with a 33-38 cm long tail.

The Indian Pangolin inhabits the plains and lower slopes of the hills south of the Himalaya: the Chinese Pangolin occurs in parts of north-eastern India.

Pangolins live in self-made burrows and feed on ants, termites, and their eggs. So their feet are well equipped for digging with blunted claws which are larger on the forelegs. They have a long protrusible glutinous tongue which is thrust out and withdrawn into the mouth with ants and termites adhering to its sticky surface.

Though terrestrial, pangolins climb trees easily in search of ants. In this they are aided by their prehensile tail and the sense of smell, as sight and hearing are quite poor. While walking, the back is arched and the tails is held erect. While defending itself it rolls into an armoured ball which cannot be unrolled easily.



INDIAN PANGOLIN *Manis crassicaudata*
and

CHINESE PANGOLIN *Manis pentadactyla*

Pangolins living in desert areas can do without wate
if it is available they drink freely. The young are
duced at different times of the year in several regi

It is hunted by local tribes for its flesh, and its scales
used as a charm against rheumatic diseases.

PYGMY HOG *Sus salvanius*

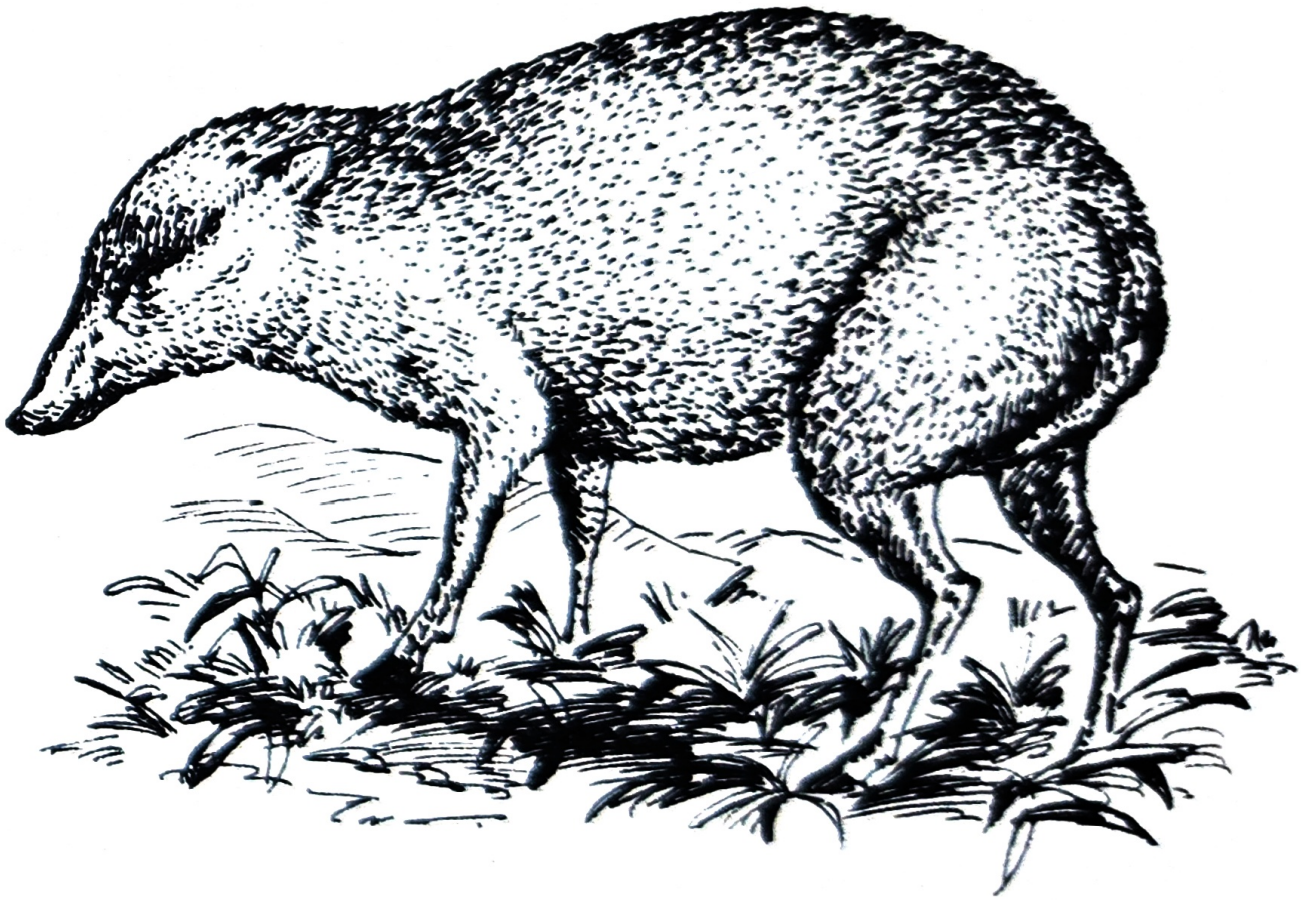
The Pymy Hog is the smallest wiid pig in the w
measuring hardly 25 cm at shoulder height.

The adult is blackish-brown and weight about 3-5
The jaws are short, and the eyes are placed midway
tween the snout and the ear. This nocturnal an
which is hardly ever seen, has habits similar to thos
the wild boar, and lives in herds of 5 to 20 animal

An inhabitant of the Duars region of the eastern Hi
layan foothills, the Pygmy Hog feeds on roots, bulbs,
occasionally on insects, lizards, and small birds.

Till recently believed extinct, the Pygmy Hog has b
sighted in the Himalayan foothills between Bhutan
north-west Assam. In the past, its habitat stretched f
the Shiwalik foothills to Assam and Arunachal Prad

The Pygmy Hog's population suffered great lo
mainly due to the burning down of the grass plair
make way for agriculture and human habitation
also due to excessive hunting for flesh.



PYGMY HOG *Sus salvanius*

RATEL *Mellivora capensis*

The Ratel has a reputation for digging into graves and feeding on corpses. In many Indian languages, its name means "grave-digger". But as this interpretation has never been verified, it is unlikely to be a fact.

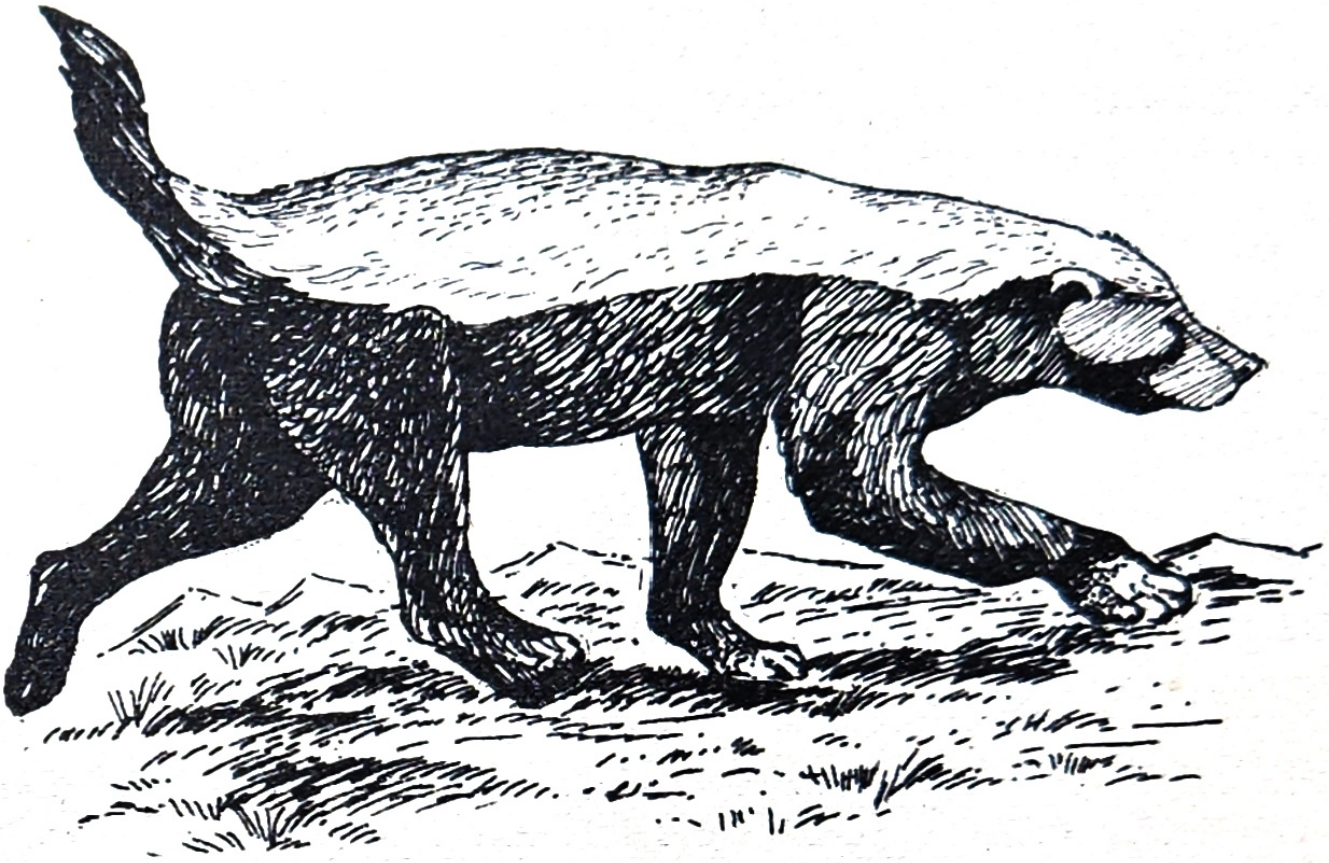
It is a small bear-like animal, the head and body measuring about 60 cm, with a pale grey or whitish upperside and a contrasting dark or black underside. The tail is small, and the legs, short and stumpy with broad feet and long blunt claws. The secretion from the tail glands is very strong and pungent.

Ratels are found all over India in the desert, in dry and in moist deciduous zones. They live in hilly areas, where shelter can be easily found or in open plains where they dig burrows along streams and *nallas*. Basically carnivorous, the Rattel feeds on small mammals, birds, reptiles, insects, fruit, and honey.

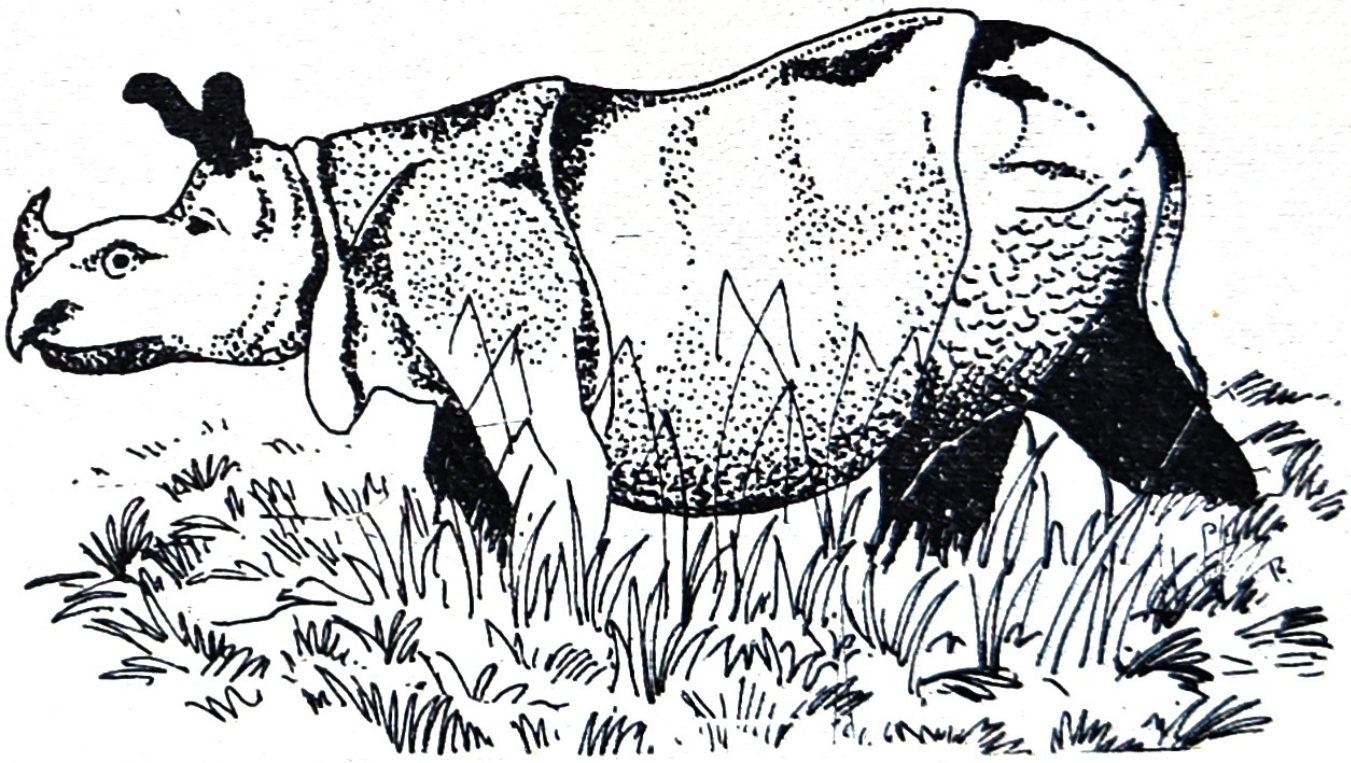
Habitat loss has been the main reason for the decrease in its population.

GREAT INDIAN ONE-HORNED RHINOCEROS *Rhinoceros unicornis*

The Great Indian One-Horned Rhinoceros is one of the largest of all existing rhinoceroses, standing at a height of about 170-180 cm at the shoulders with a girth of about 335 cm at the withers. The average horn measures approximately 20 cm.



RATEL *Mellivora capensis*



GREAT INDIAN ONE-HORNED RHINOCEROS
Rhinoceros unicornis

The thick skin of this huge herbivore is divided into heavy folds and is studded with round tubercles, which are more prominent on the shoulders and hind quarters.

Once commonly found in the Gangetic plain and the terai region, it is today confined to parts of West Bengal, Dooars, and Assam. It has also been recently reintroduced into Dudhwa National Park in Uttar Pradesh.

Generally solitary by nature, it feeds mostly on grass and prefers open grasslands and swamps. The male, as well as the females, have periods of 'heat' and gestation is about 16 months.

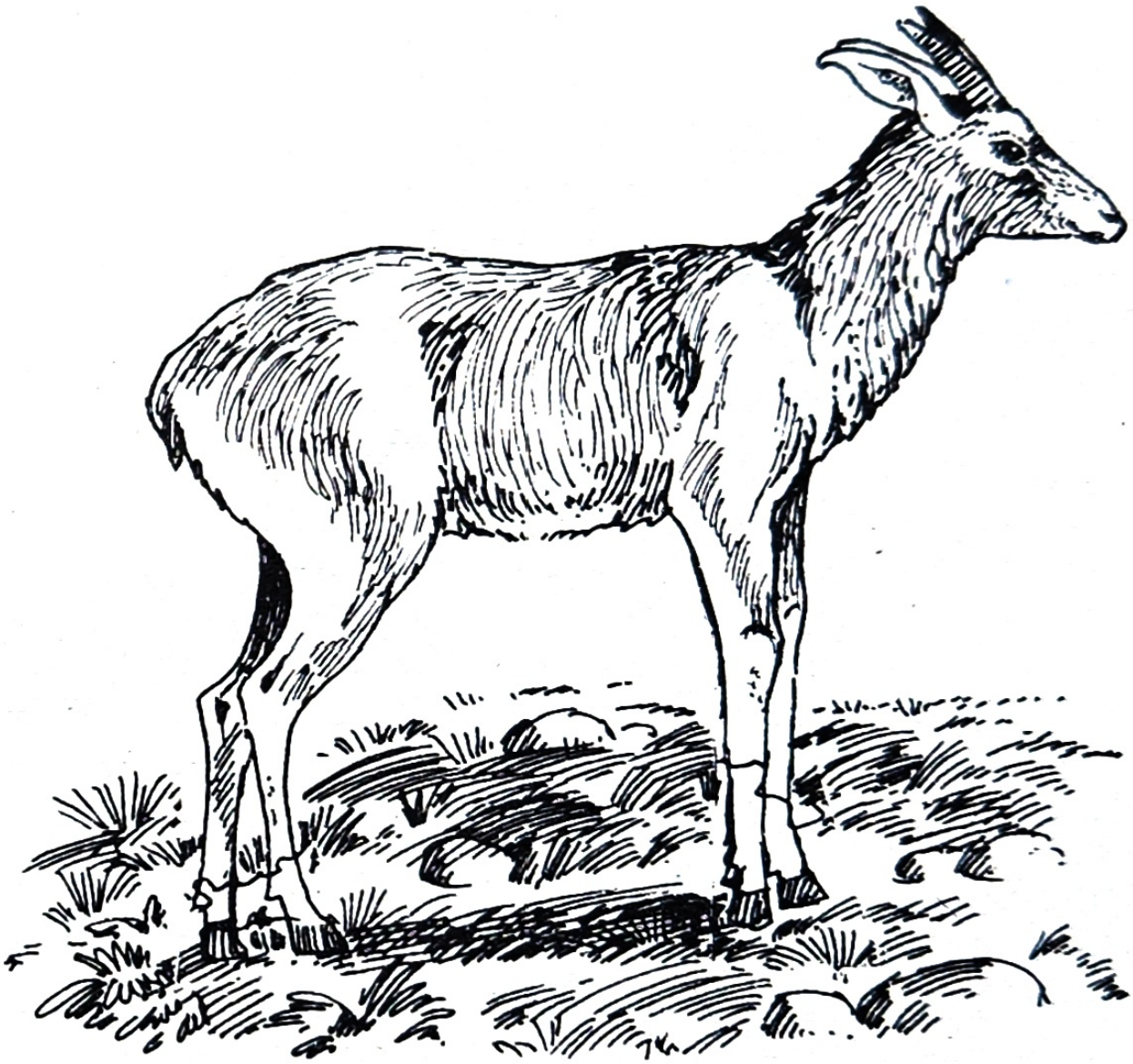
This great animal, a symbol of power and strength, is a victim of various superstitions. It is believed that the rhino horn possesses aphrodisiac powers, and this is the main reason for its slaughter.

SEROW *Capricornis sumatraensis*

The Serow measures between 100 and 110 cm at the shoulders with black horns 20 to 25 cm long and 10 to 15 cm thick which are wrinkled for more than half of the length.

It is an awkward animal with donkey-like ears, thick neck, and short limbs. The coarse coat varies in colour from grizzled black to reddish-brown. The underparts and muzzle are a muddy-white in colour.

The Serow is found in the Himalaya, generally between 850 to 3050 metres, from Kashmir to the Mishmi Hills in Assam.



SEROW *Capricornis sumatraensis*

Despite its unprepossessing appearance, this solitary creature is quick to move and dashes away with equal ease in flat country as on rocky ground.

It lives in thickly-wooded gorges and shallow caves and comes out to feed in the mornings and evenings. Rutting is at the end of October and the young are born in May and June.

Hunting coupled with the destruction of its habitat has adversely affected populations.

CLAWLESS OTTER *Aonyx cinerea*

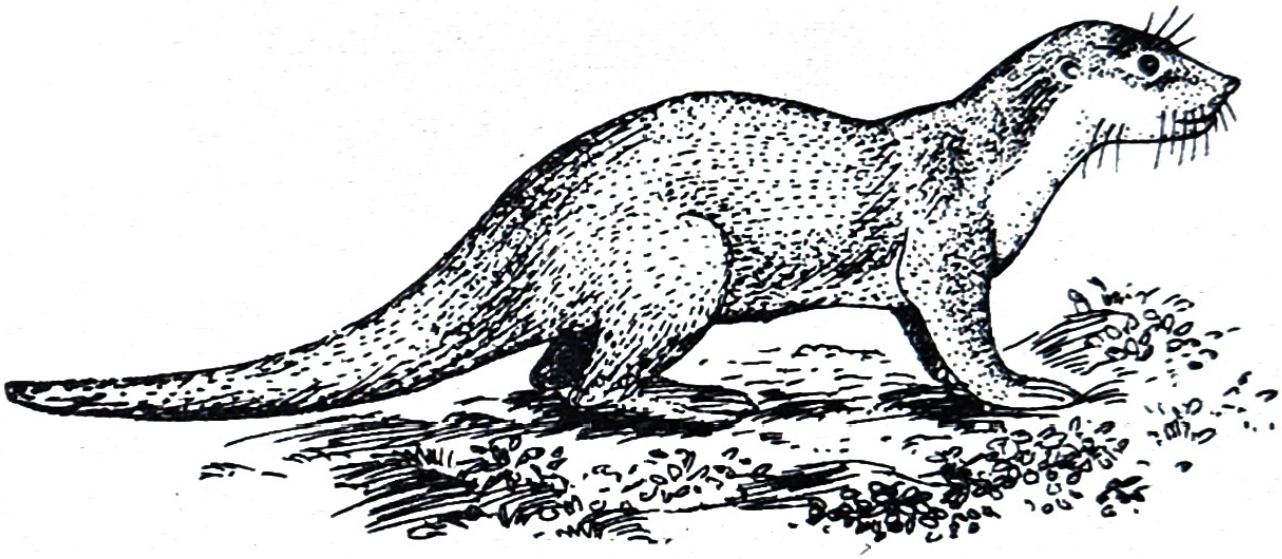
The Clawless Otter is the smallest of Indian otters, measuring only about 45 to 55 cm, with a 25 to 35 cm tail.

As the name suggests, the claws of these otters have small spikes and do not protrude from the toe pads. Their colour is dark brown on top and paler below.

They inhabit the Himalayan foothills from Kulu eastward to the plains and hills of Assam, lower Bengal, and the hills of Coorg, Nilgiri, and Palni.

This small otter hunts in hill streams, rivers, tanks, flooded rice fields, and creeks. Armed with massive teeth, it feeds on crabs, snails, mussels, other aquatic creatures and, to a lesser extent, fish.

The smooth soft fur has great commercial value and, as a consequence, they are indiscriminately hunted.



CLAWLESS OTTER *Aonyx cinerea*

SLOTH BEAR *Melursus ursinus*

The Sloth Bear which accompanies street performers to entertain children is a familiar sight.

The male is usually larger than the female, standing about 85 cm high at the shoulders (total length 140-170 cm). It has an elongated muzzle and lower lip, long, shaggy brownish-black hair, and short hind legs. There is generally a V-shaped, whitish breast-patch, the muzzle and tips of the feet are dirty white, whereas the claws (longer on the forefeet) are ivory white.

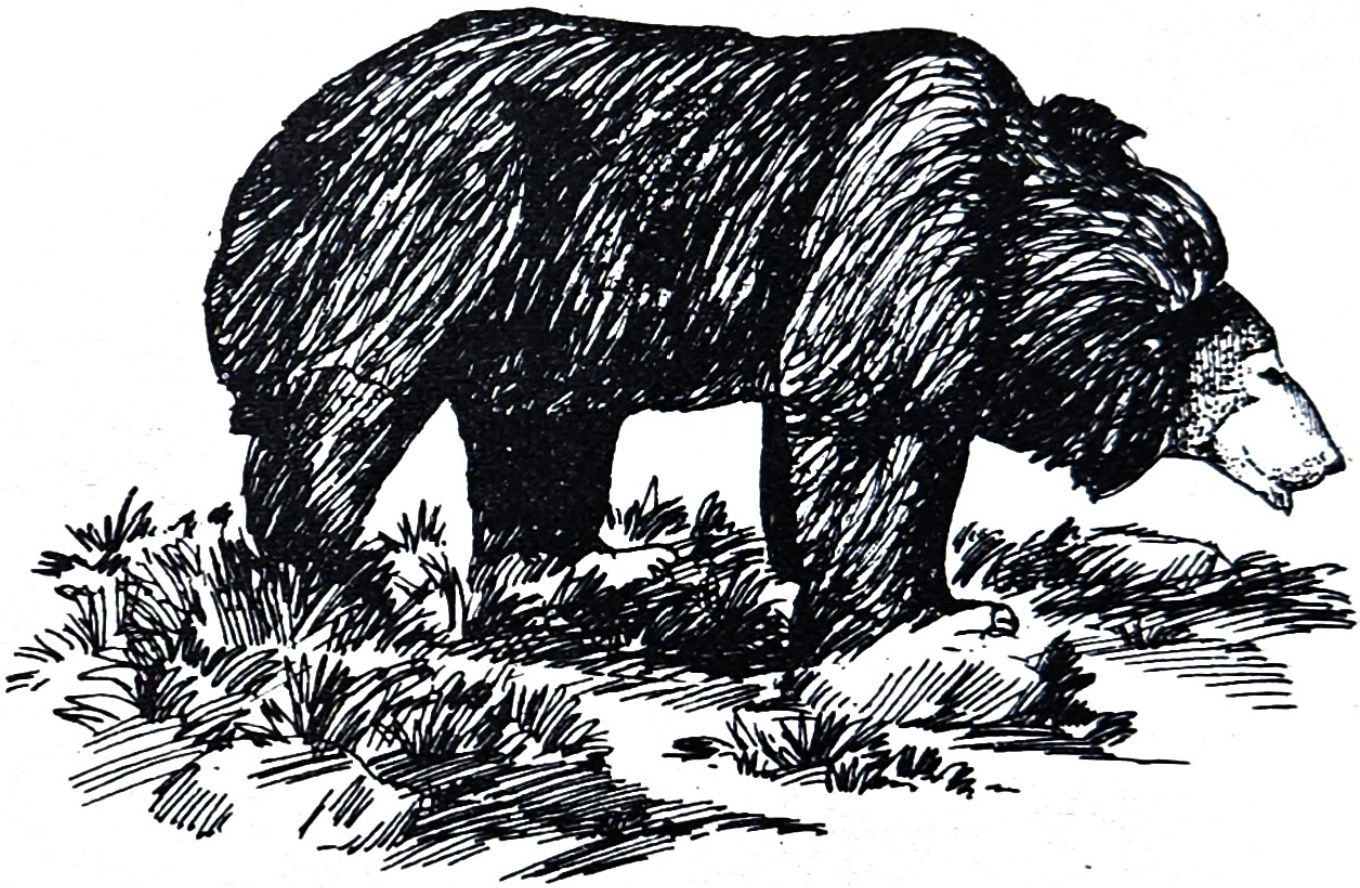
It is found throughout India in densely wooded forests, particularly where rocks and boulders can be found to offer shelter during summer and the rains. Generally nocturnal, this bear can sometimes be seen during the day in places where there is little or no disturbance. Its diet consists mainly of fruit, insects, and honey, but a hungry Sloth Bear may also eat carrion.

Mating time is usually in hot weather, and the young are born in winter. As the male deserts its mate after breeding, the care of the young falls on the mother.

Their population has dwindled mainly due to trapping for sale to street performers and circuses.

SLOW LORIS *Nycticebus coucang*

This small, shy animal belongs to the primate group but is distrinctly different in appearance from apes



SLOTH BEAR *Melursus ursinus*.

and monkeys. Grasping hands and feet with a well developed thumb or big toe, which helps in providing a proper grip, puts this animal in a group called the lemur. This group is represented in India by two species — Slow Loris and Slender Loris.

The Slow Loris is a stout animal—about 30-40 cm—with a stumpy tail. Its soft, thick coat is silver grey, with a prominent brown stripe running from the crown all the way down the back. It has large, lustrous eyes surrounded by a brown patch.

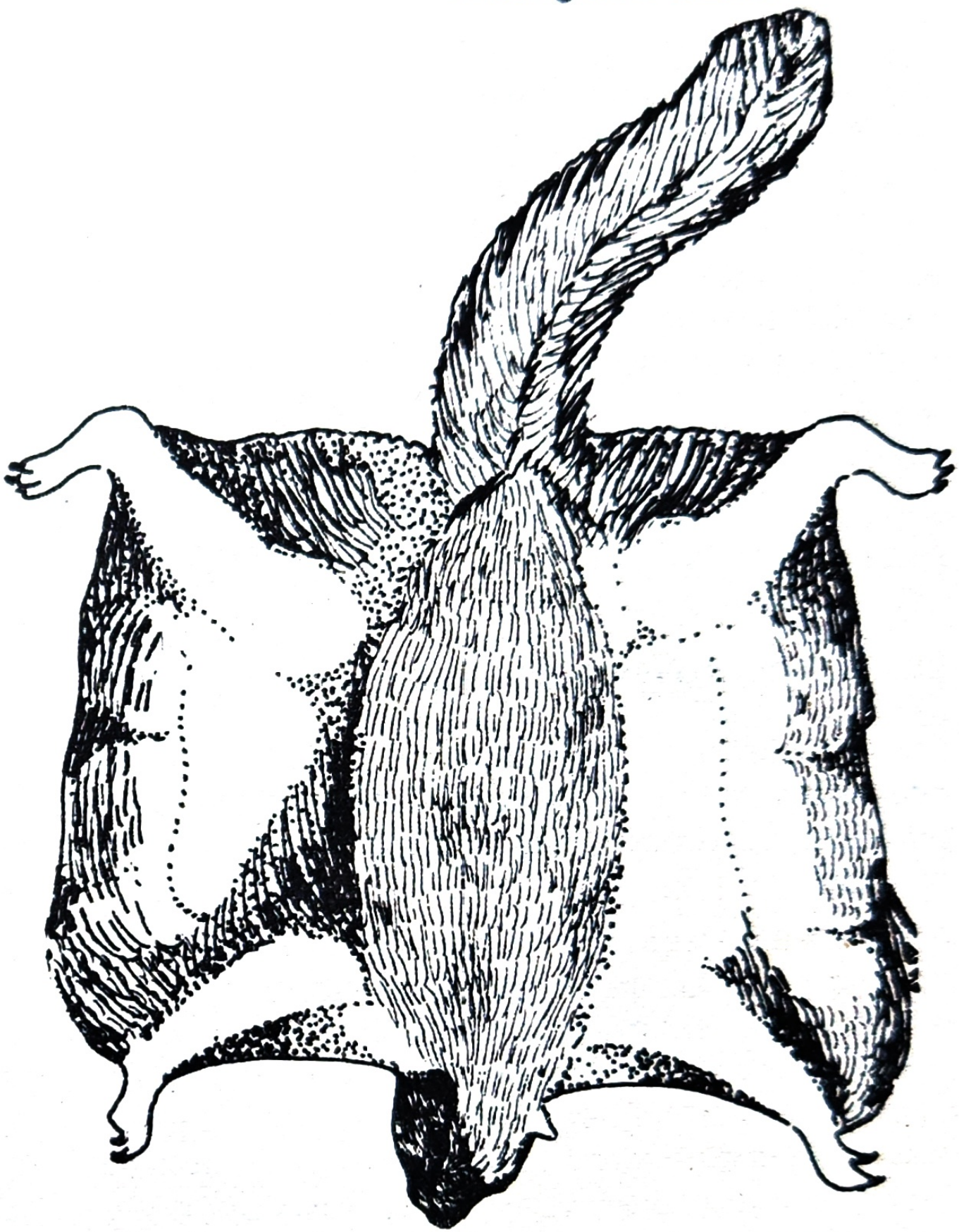
A nocturnal inhabitant of the dense forests of North-East India, it is seldom seen. It feeds on insects and fruits and its movements are very slow and deliberate.

Disturbance and destruction of habitat, as also a host of superstitous beliefs about the medicinal value of the various parts of its body, have greatly brought down its numbers.

SMALL TRAVANCORE FLYING SQUIRREL *Petinomys fuscocapilius*

The Small Travancore Flying Squirrel *(Petinomys fuscocapilius)* is restricted to the tropical evergreen forests of Kerala and adjacent areas.

This species, similar to other flying squirrels, resembles the common squirrel but for the apparent gift of flight, which is in reality simply the ability to leap from one tree to another, or glide from higher to lower heights by stretch-



SMALL TRAVANCORE FLYING SQUIRREL
Petinomys fuscocapilius

ing the limbs, which are connected by skin flaps that serve as parachutes. While resting, this 'parachute' is hardly visible as it is tucked close to the body, making the animal appear like an ordinary squirrel, albeit less agile because of its hobbled limbs.

All flying squirrels are covered with long hair which makes them look heavier than they are. The Small Travancore Flying Squirrel measures 25-30 cm.

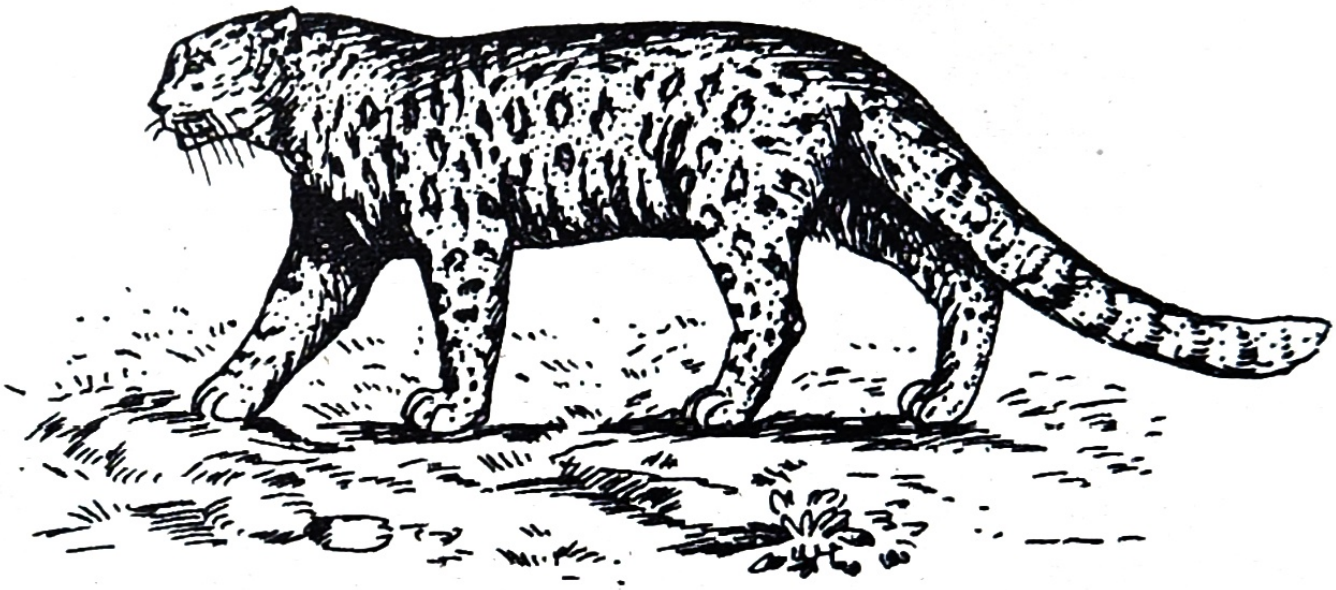
It is nocturnal in habit, and subsists on a diet of nuts and fruits.

This species is endangered due to over-exploitation for its pelt and flesh.

SNOW LEOPARD *Panthera uncia*

The inaccessiblity of this beautiful cat's habitat, coupled with the perfect camouflage provided by the colouring of its coat, has made observation extremely difficult.

A little smaller than the leopard, with a relatively longer tail, the Snow Leopard measures about 100-110 cm in length with a 90 cm (approx) tail. It has a short muzzle, high forehead, and vertical chin. The soft, greyish-white coat is spotted with faint, dark-coloured rosettes, which help them blend into the snow-covered rocky habitat. These rosettes are less visible in the luxuriant winter coat which has the underside more or less completely white; the foot pads are lined with hair which protects them from snow.



SNOW LEOPARD *Panthera uncia*

In India, Snow Leopards are found all along the Himalaya, above the tree-line, i.e. about 3660-3965 metres above sea-level. Like other beasts of prey, the Snow Leopard also follows the migration of its prey, which includes wild sheep, goats, musk deer, hares, and marmots. In summer, when the high pastures are open to grazing, it often preys on domestic sheep, goats, and ponies belonging to nomadic herdsmen. It hunts mostly at night.

Indiscriminate hunting for its valuable fur has considerably reduced the Snow Leopard population, and the few that live today owe their survival to the protection offered by their inhospitable habitat.

SPOTTED LINSANG *Prionodon pardicolor*

Typically civet-like in build, the Spotted Linsang or Tiger Civet measures about 37 cm with a 2-3 cm tail.

It has a long body, pointed muzzle, short limbs, all of a golden-brown colouring with bold black spots. The tail is ringed. It is different from other civets in the absence of scent glands in both the sexes.

It is believed that the Spotted Linsang breeds in hollows of trees and hunts small mammals both on the ground and among the trees.

The beautiful golden fur has led to a wanton poaching, thereby endangering this uncommon civet.

SPOTTED LINSANG *Prionodon pardicolor*

SWAMP DEER *Cervus duvauceli*

The Swamp Deer or the Barasingha, as it is more commonly known, is often confused with the Sambar because of the close resemblance. The main difference between the two is the antlers: bigger with more than twelve tines, in the Swamp Deer while the antlers of the Sambar are smaller, with only 6 tines (3+3). In India there are two varieties of Barasingha: the Hard-ground Barasingha and the Swamp-dwelling Barasingha.

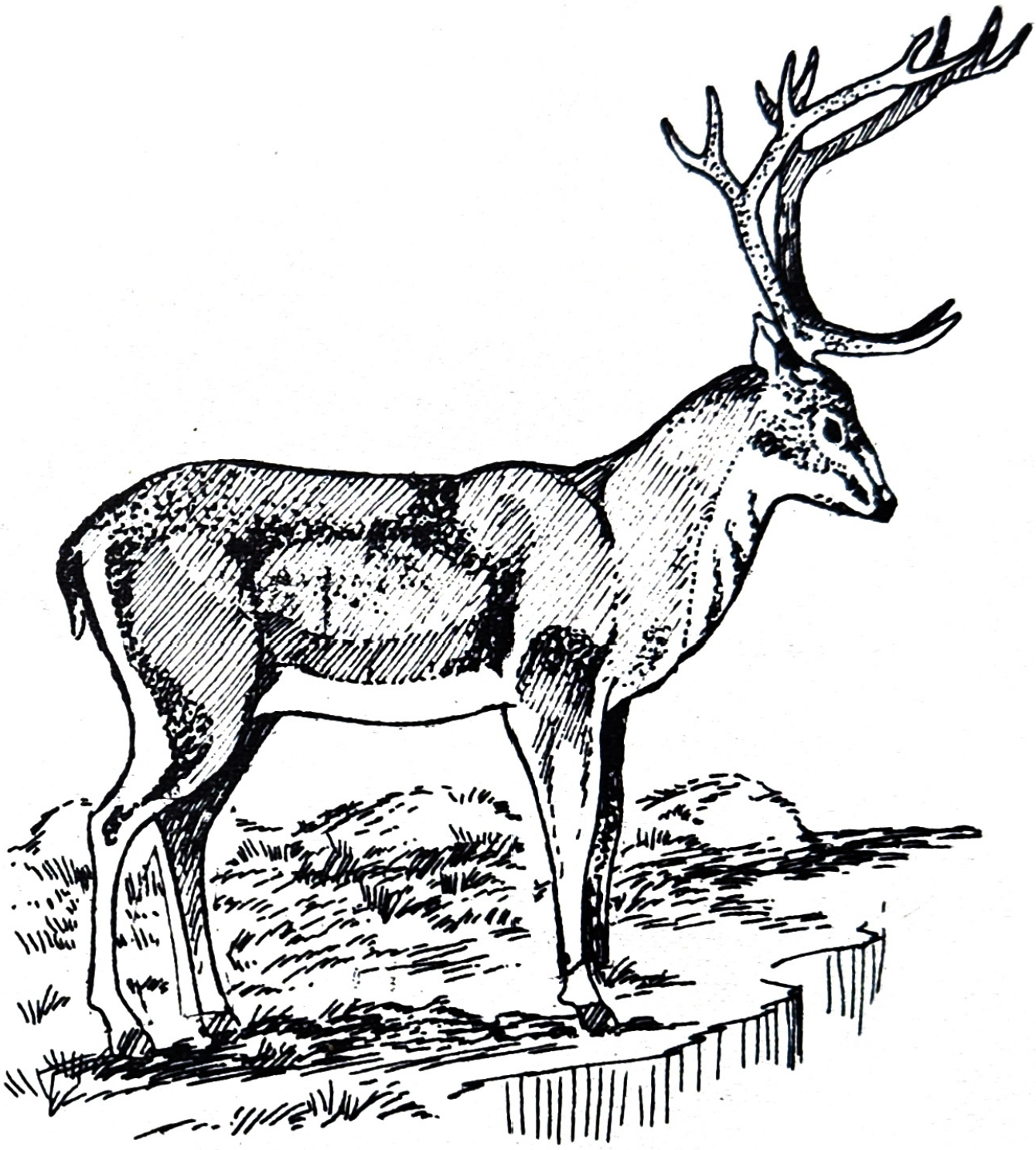
The Hard-ground Barasingha, distinguished by small well-knit hooves, is found in the hard open grasslands, along forest fringes in Madhya Pradesh. The Swamp-dwelling Barasingha is characterized by its splayed hooves and larger skull, and is found in the terai of Uttar Pradesh, Assam, and Sunderbans.

The Swamp Deer is less nocturnal in habit than the Sambar, and feeds till late in the mornings and again in the evenings. It has a keen sense of smell.

These animals have been extensively hunted for their magnificent antlers, as also for the flesh and skin which provide soft, spongy leather.

TAKIN *Budorcas taxicolor*

Standing about 110 cm high at the shoulders, the Takin is a clumsy-looking animal with a large heavy mouth, thick neck, and heavy body supported by short, thick legs.



SWAMP DEER *Cervus duvauceli*

The muzzle is covered with hair, except for a bare patch at the tip. This is attributed to life at high altitudes where snow has to be scraped away to get to the vegetation underneath. The colour of the coat ranges from dark brown to golden-yellow and the horns grow forwards, bend downwards, and then curve out again with their points growing up.

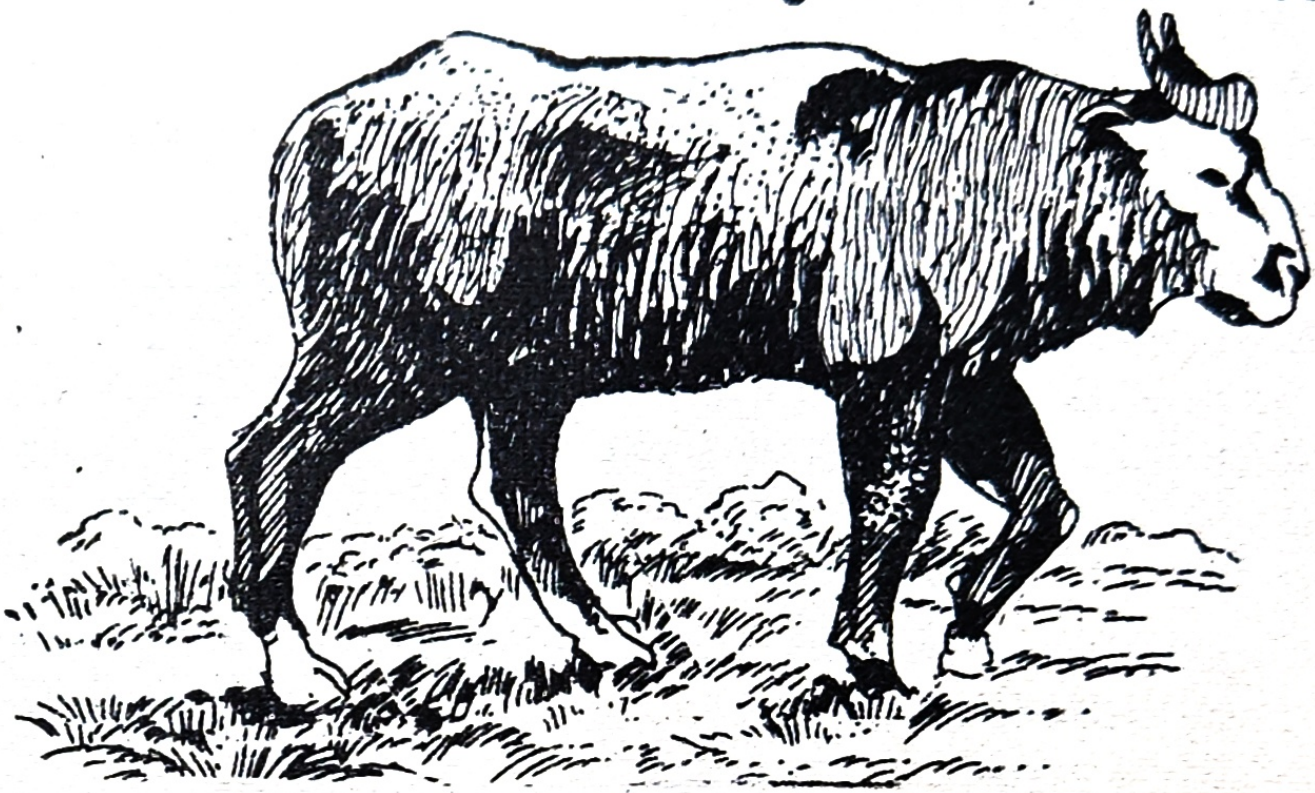
The Takin inhabits dense bamboo and rhododendron forests of Eastern Himalaya between 2135 to 3050 metres, venturing down to 1200 metres in search of food.

This animal is very rarely seen now because it has been hunted down for its meat and skin.

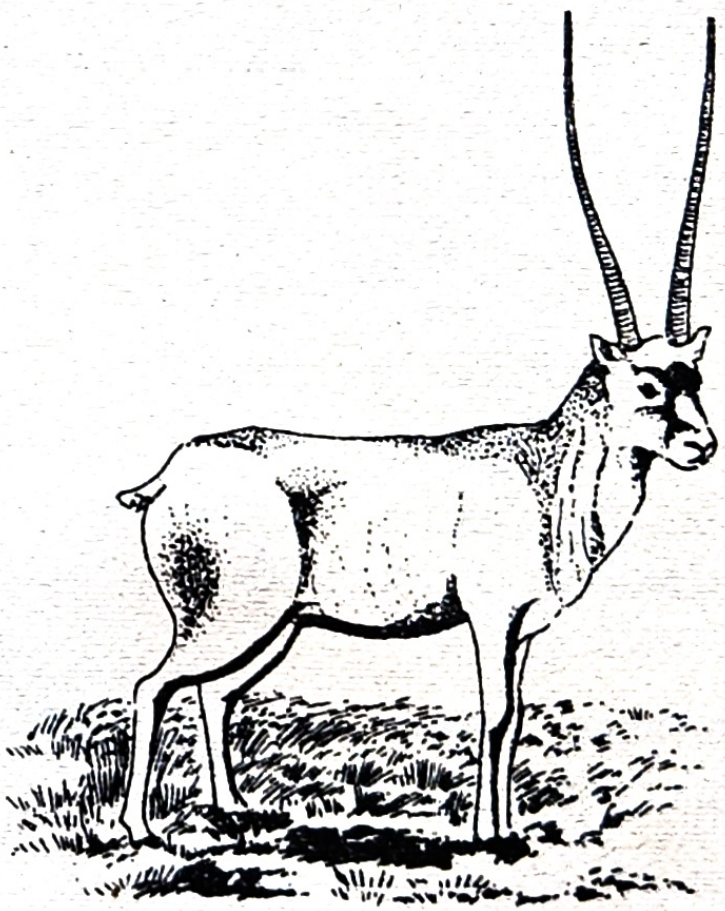
TIBETAN ANTELOPE OR CHIRU *Pantholops hodgsoni*

The Chiru is basically a high altitude animal, with a height of 80 cm (approximately) at the shoulders. It has a unique adaptation: its swollen muzzle and nostrils with an extensive sac help this animal in getting extra air in an otherwise rarefied atmosphere.

Fawn on top, paler below, the coat is very thick and woolly. The male has a darker face and a dark stripe running down the front of each leg. The female is hornless whereas the male bears horns measuring between 60 to 65 cm which rise close together then curve forwards—thus, when seen in profile, the slender horns give the appearance of a one-horned animal.



TAKIN *Budorcas taxicolor*



TIBETAN ANTELOPE OR CHIRU *Pantholops hodgsoni*

Within Indian territory, the Chiru is found only in the Chang Chen Mo valley of northern Ladakh, when they cross over from Tibet.

Usually seen in small herds, the favourite grounds of this antelope are the grassy plains next to the Chang Chen Mo river. Chiru dig hollows in the ground to lie down, and depend on the faculties of sight and smell to warn them of an approaching predator. The rutting season is in winter and the young are born in May and June.

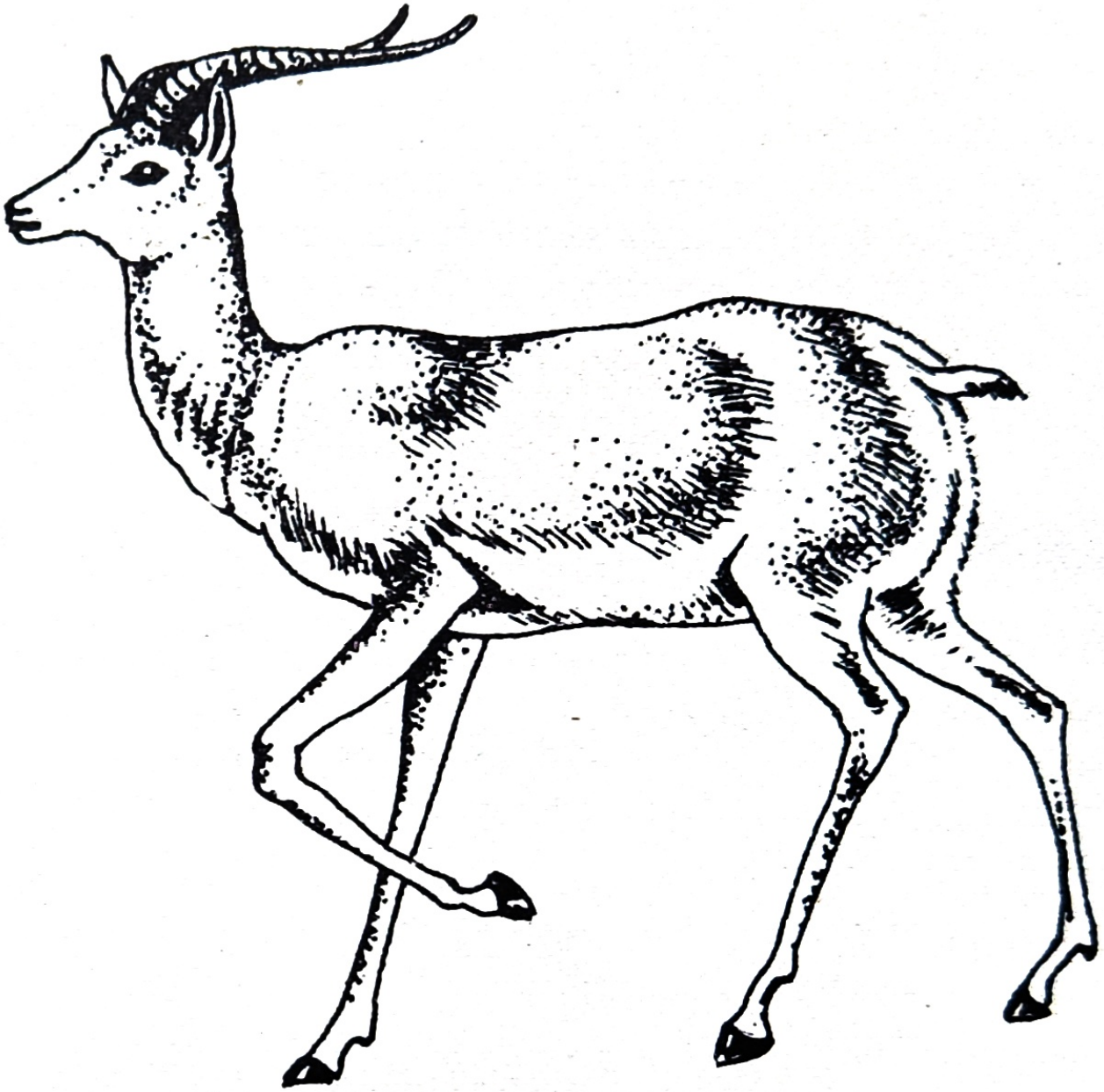
Hunted as a source of wool and meat, their population is now very scanty.

TIBETAN GAZELLE *Procapra picticaudata*

This Tibetan Antelope is more or less the same size as the Chinkara or Indian Gazelle. Though it lives mainly on the Tibetan plateau, it is also found in north-eastern Ladakh.

It has a short, grey summer coat which is transformed into a fawn-coloured, soft woolly winter coat. The under-parts are lighter with a distinct white patch on the rump. The horns, measuring around 30 cm, rise straight then curve sharply backwards.

Their numbers have been depleted because of indiscriminate hunting for flesh and wool.



TIBETAN GAZELLE *Procapra picticaudata*

TIBETAN WILDASS *Equus hemionus kiang*

The Tibetan Wild Ass or Kiang is regarded by some as a distinct species and by others as a race of the Asiatic Wild Ass.

They are darker and redder in colour than the Indian Wild Ass (i.e. the Asiatic Wild Ass) and have a narrower dorsal stripe. The major difference, however, is that the hooves of the Kiang are larger and definitely horse-like.

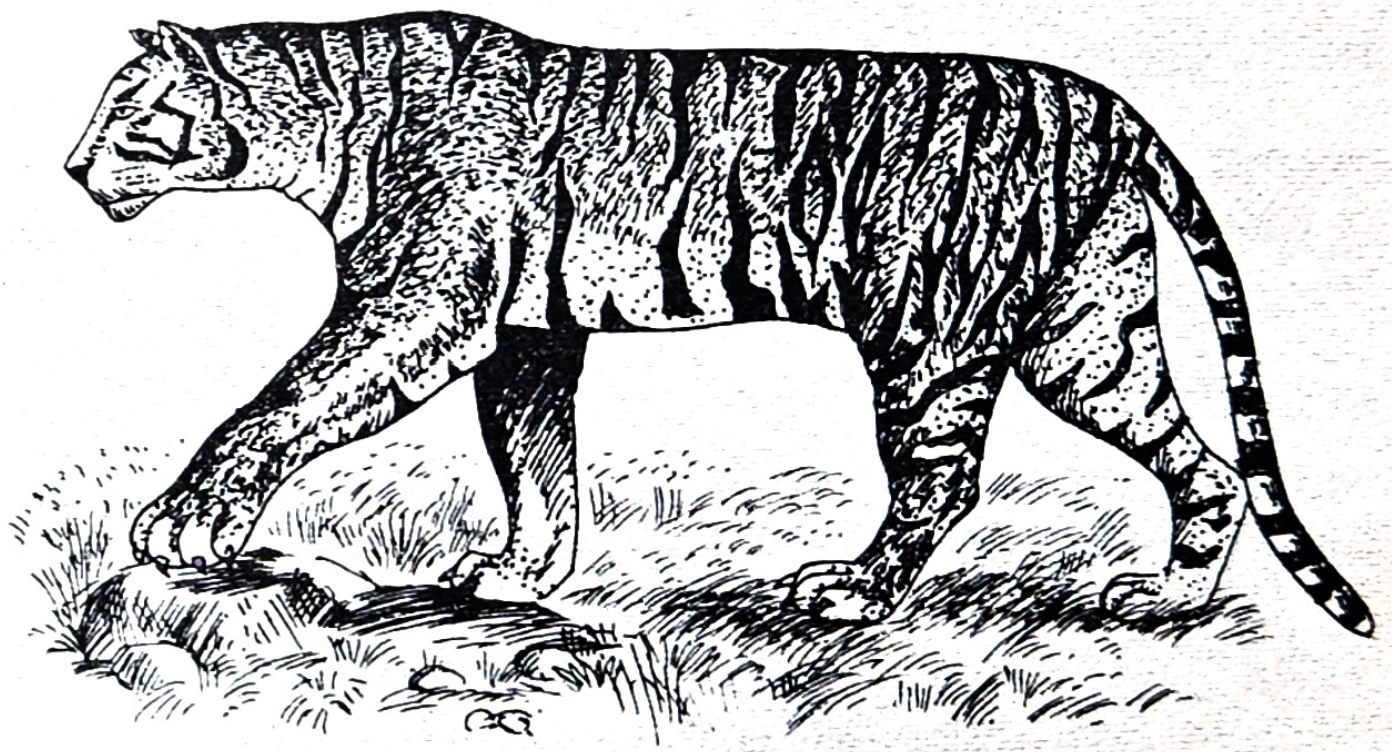
They inhabit the cold desert of Ladakh and the Tibetan plateau.

TIGER *Panthera tigris*

The Tiger is a richly coloured cat, with black stripes on a short, glossy-golden coat. The average length of the male is between 275 to 290 cm, while the female is around 260 cm.

It is found all over the Indian sub-continent from the Himalaya to Kanyakumari, except for the deserts of Rajasthan, Punjab, and Kachchh.

Generally the Tiger hunts between dawn and sunset and can be said to have three basic requirements: enough large animals to prey on, thick cover to sleep in, and water to quench its thirst. Solitary by nature, males and females came together only in the short breeding season, at the end of the rainy season. The period of gestation is about 15 to 16 weeks and 2 or 3 cubs are born in a litter.



TIGER *Panthera tigris*

Contrary to common fears, the Tiger does not attack humans unless old and infirm, disturbed, or threatened.

Extensive hunting and destruction of habitat has brought the numbers of this magnificent cat down to 1800 (approx.) at the turn of the century. Drastic measures were undertaken and the species was brought back from the brink by the government's Project Tiger.

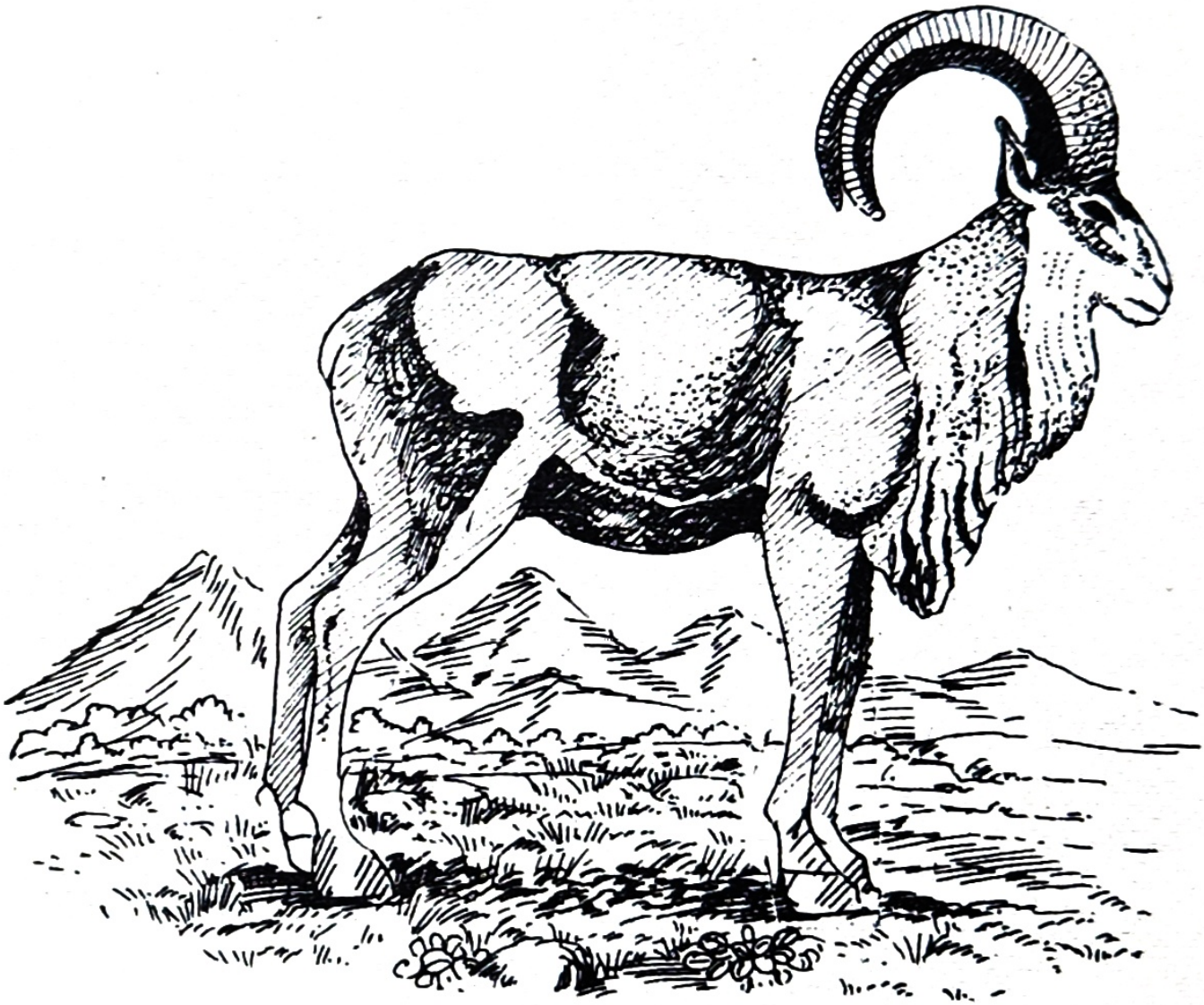
SHAPU or **URIAL** *Ovis orientalis*

Its smaller size distinguishes the Urial from other species of wild sheep. There are two races found in India: the Ladakh Urial which stands at a height of about 90 cm at the shoulders, and the Punjab Urial which is a little shorter.

The summer coat of the Ladakh Urial is grey or fawn, turning brownish-grey in winter. The Urial from the Punjab hills has a redder coat. An adult ram has a collar or ruff around its neck (much of this is shed with the summer coat), rising from the cheek down to the throat. This collar is dark brown or black in colour but turns grey with age.

The main difference in the two races lies in the wrinkled horns: those of the Punjab race form a circle while in the Ladakh race they merely turn inwards at the tip without forming a circle.

In Ladakh this wild sheep inhabits the steep grassy hill slopes above the forests, while in Punjab it roams the rocky, scrub-covered hills.



SHAPU or **URIAL** *Ovis orientalis*

WILD YAK *Bos grunniens*

The Wild Yak is one of the highest-dwelling animals of the world. Massively built, an adult bull is about 170 cm high at the shoulders. Horns measure between 65 to 75 cm.

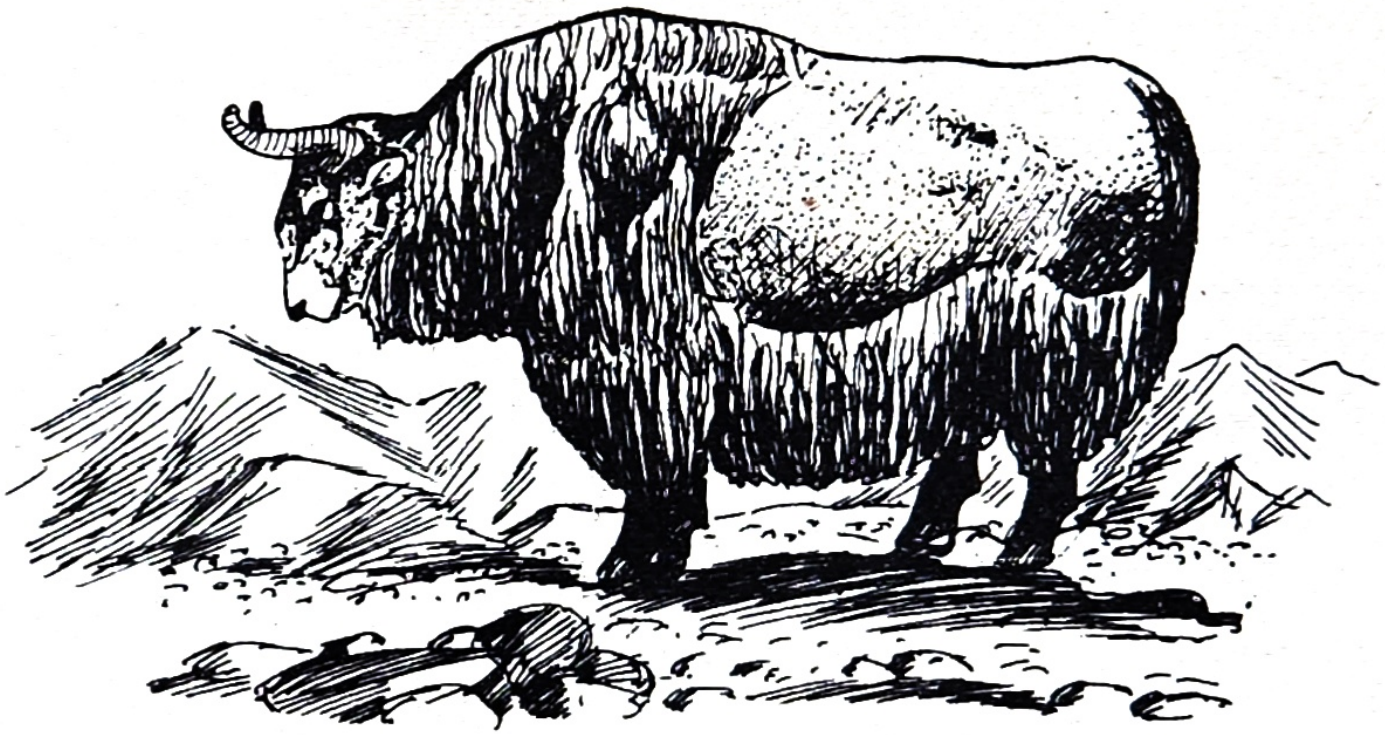
Almost completely black in colour except for a small white patch on the muzzle, the Wild Yak has a drooping head, high humped shoulders, and shaggy coarse hair hanging from its body. There is a bushy tuft between the horns and a thick mane on the neck.

It is found in the Chang Chen Mo valley of Ladakh but sometimes stray into the Sutlej valley and the passes of eastern Kumaon. Summer or winter, it is always found between 4270 to 6100 metres.

Its summer diet consists of grass and shrubs which spring up on the barren and desolate mountains. In winter, even this sparse vegetation is hard to come by, and some die of starvation. Frozen snow forms their liquid intake. The sense of smell is highly-developed.

The rutting season is in late autumn and the young are born in April.

Hunted for its flesh and wool, the Wild Yak herds can be seen only in isolated pockets today.



WILD YAK *Bos grunniens*